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MMPA Bulletin

Reducing Dolphin Mortality in the Eastern Tropical Pacific Tuna Fishery: Part Two

This article continues a series devoted to explaining the tuna-dolphin issue. For background on efforts to reduce dolphin mortality in the eastern tropical Pacific Ocean (ETP) tuna purse seine fishery and on the establishment of the international dolphin conservation program, please see MMPA Bulletin issue No. 11, "Reducing Dolphin Mortality in the Eastern Tropical Pacific Tuna Fishery."

The International Agreement. In October 1995, the United States and ETP fishing nations negotiated the Panama Declaration. The program, outlined in the Panama Declaration, would provide greater protection for dolphins in the ETP and enhance the conservation of yellowfin tuna and other living marine resources in the ETP ecosystem. The signing nations agreed to enter into a binding international agreement for the continued protection of ETP dolphins and the entire ETP ecosystem, providing that the United States amended import requirements of the MMPA for those countries participating in the international dolphin conservation program in the ETP. In response to the Panama Declaration, the U.S. Congress passed the International Dolphin Conservation Program Act (IDCPA) in August 1997. The IDCPA amended the MMPA to provide exception to the import prohibitions for those nations participating in the international dolphin conservation program. The IDCPA would not become effective until a binding international agreement was adopted and in force. A number of environmental organizations, including the Center for Marine Conservation and the World Wildlife Fund, supported passage of the legislation.

In May 1998, eight nations, including the United States, signed a binding, international agreement to implement the international dolphin conservation program. The Agreement officially entered into force, on February 15, 1999, when the fourth nation ratified the Agreement. This Agreement on the IDCPA (Agreement) was a legally binding international agreement for dolphin conservation in the ETP. On March 3, 1999, the Secretary of State certified to the U.S. Congress that the Agreement was in force. The IDCPA went into effect on this date.

What Does "Dolphin-Safe" Mean?

Previously...

...tuna harvested in the ETP could be labeled "dolphin-safe" only if no intentional setting on dolphins occurred during the fishing trip.

After the label changes in Fall 1999...

...tuna harvested in the ETP may only be labeled "dolphin-safe" if no dolphins were killed or seriously injured during the set in which tuna were caught.

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National Marine Fisheries Service, Office of Protected Resources

The Dolphin-Safe Label. Under the IDCPA, the Department of Commerce is required to study the effects of intentional encirclement on dolphins taken in the ETP purse seine fishery and to conduct population assessments and stress studies. The IDCPA requires the Department of Commerce to make an initial finding regarding these studies in 1999, and a final finding in 2002, to determine whether the tuna fishing practice of encircling dolphins has a significant adverse impact on any depleted dolphin stock in the ETP. The IDCPA automatically changes the standards for labeling tuna as "dolphin-safe," unless the Department of Commerce can prove that this method of fishing is causing significant adverse impact on any depleted dolphin stock in the ETP. NMFS, an agency of the Department of Commerce, is conducting the required studies on the effects of encircling dolphins to catch tuna and was delegated the authority to make the initial and final findings.

Specifically, the IDCPA requires NMFS to research the effects of repeated chase and encirclement of dolphins in the ETP and to provide data for the initial finding. Based on preliminary results of this research, NMFS made an initial finding on April 29, 1999. In its initial finding, NMFS concluded that there is not enough data to confirm that setting purse seine nets on dolphins in the ETP is causing a significant adverse impact on any depleted dolphin stock in the ETP. Because the study did not show with certainty that the depleted dolphin stocks are adversely affected, the IDCPA requires that NMFS change the "dolphin-safe" labeling standard. When this new labeling standard goes into effect, tuna harvested in the ETP by large purse seine vessels (greater than 400 short tons) may be labeled "dolphin-safe" only if no dolphins were killed or seriously injured during the set in which the tuna were caught. This change in the "dolphin-safe" labeling standard is expected to become effective in Fall 1999, upon the effective date of the final regulations to implement the IDCPA.

Under the IDCPA, NMFS is required to develop a domestic program to track and verify all ETP tuna labeled "dolphin-safe." To fill this requirement, NMFS is establishing a program that will ensure that only tuna caught during a set where there is no dolphin mortality or serious injury will be labeled "dolphin-safe." This tracking and verification program will track tuna from the set in which the tuna is caught to the can in which the tuna is packed.

Through 2001, NMFS' scientists will continue to collect data on dolphin population abundance and biology and ascertain whether there are adverse impacts. NMFS will make a final finding by the end of 2002.

Proposed Regulations. On June 14, 1999, NMFS published proposed regulations to implement the IDCPA. These regulations would: (1) allow the entry of yellowfin tuna into the United States under certain conditions from nations in compliance with the International Dolphin Conservation Program that otherwise would be under embargo; (2) allow U.S. fishing vessels to participate in the fishery in the ETP on equivalent terms with vessels of other international dolphin conservation program signatory nations and; (3) ensure adequate tracking and verification of tuna imports from the ETP. During a 30-day public comment period, NMFS held two public hearings on this proposed rule: one in Long Beach, CA on July 8th and one in Silver Spring, MD on July 14th.

For more information on the IDCPA and the "dolphin-safe" label, please contact Cathy Eisele at (301) 713-2322 ext. 120 or J. Allison Routt at (562) 980-4019. Additional information regarding the ETP dolphin research, the initial finding, and copies of the proposed rule can be found on the NMFS Office of Protected Resources web site at:

http://www.nmfs.gov/prot_res/main/tunadolphin.html

MMAP Posters Available

To remind fishermen of their reporting responsibilities under the MMPA, the Office of Protected Resources, the Center for Marine Conservation, and Norcross Wildlife Association joined forces to develop a poster to be displayed at fishing ports and marinas.

By reporting marine mammal serious injuries and mortalities, fishers help NMFS to accurately classify commercial fisheries according to their levels of interaction with marine mammals under the Marine Mammal Authorization Program (MMAP). The more information that fishers can get to NMFS on these interactions (or lack thereof), the better. The data collected from the reporting forms are crucial to NMFS in making the best fisheries management decisions possible.

If you have a shop or other facility that fishers frequent, and would be willing to display one or more posters, we will ship them to you free of charge.

For more information about reporting requirements or to receive posters, contact Vicki Cornish at (301) 713-2322, ext. 125.

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Stranding News

NMFS Meets with Mexican and Caribbean Stranding Networks

The NMFS Marine Mammal Health and Stranding Response Program and Wildlife Preservation Trust International (WPTI) are working together to expand cooperation between U.S. stranding networks and those in Mexico and other Caribbean nations. By collaborating with stranding network participants in other countries, NMFS and WPTI hope to more effectively monitor the spread of marine mammal disease, marine mammal health baselines, and other causes of injury and mortality in marine mammal stocks living in the shared waters of the Gulf of Mexico, the Caribbean Ocean, and the Pacific Ocean. As an initial step in this process, NMFS and WPTI are hosting a series of training workshops to assist Mexican and Caribbean stranding program participants in improving their skills and standardizing protocols for live animal response, tissue and data collection, and necropsy.

The first training workshop was held in Belize City, Belize on July 1-2, 1999, in cooperation with the United Nation's Coastal Zone Management Project. This workshop included lessons on marine mammal anatomy and physiology, veterinary techniques, and sampling protocols, as well as causes of disease and mortality in marine mammals. Due to the diversity of Belizean marine life, the workshop addressed whales, dolphins, and manatees and was attended by stranding network participants from Mexico and Guatemala. as well as Belize. Representatives from WPTI, the U.S. Geological Survey's Sirenia Project, the University of Miami, and NMFS spoke on a variety of topics and answered questions from stranding network representatives regarding live stranding response, data collection, and other subjects.

At the 24th annual meeting for the Mexican Society for the Study of Marine Mammals, April 18-22, 1999, in Mazatlan, Mexico, NMFS and WPTI representatives met with stranding network participants and individuals from Mexican federal resource agencies about increasing collaboration and communication between U.S. and Mexican stranding networks. As a result of these discussions, additional training workshops were planned for Mexico. The first one will be held in La Paz in Baja California in February 2000. This workshop will address stranding events and issues common to stranding networks on the West Coast of North America. Workshop proceedings will primarily include live stranding response, tissue collection and storage, and large whale necropsy protocol, with a focus on gray whales. The second Mexican workshop will likely be held in June 2000 in Merida, the capital of the state of Yucatan, and will likely include similar topics with manatee and sea turtle stranding response on the agenda as well.

For additional information about U.S. collaboration with Mexican and Caribbean stranding programs, contact Dr. Teri Rowles, ext. 178 or Nicole R. Le Boeuf at (301) 713-2322, ext. 156.

Marine Mammal Strandings in 1998

Northeast. Stranding network participants in the Northeast Region responded to a total of 801 strandings in 1998 (283 cetaceans; 518 pinnipeds). Notable stranding events included two mass strandings: 1) four Atlantic white-sided dolphins *(Lagenorhynchus acutus)* in Wellfleet Harbor, MA, and 2) 97 dolphins in the Cape Cod area, including: 17 common dolphins *(Delphinus delphis)* and 80 Atlantic white-sided dolphins. Overall, the most commonly stranded cetacean species in the Northeast were: Atlantic white-sided dolphin, bottlenose dolphin *(Tursiops truncatus)*, harbor porpoise *(Phocoena phocoena)*, and common dolphin. The most commonly stranded pinniped species were: harbor seal *(Phoca vitulina)*, harp seal *(Phoca groenlandica)*, and gray seal *(Phoca cristata)*. *For more information about these stranding events, contact Dana Hartley at (508) 495-2090.*

Southeast. In the Southeast Region, stranding networks responded to 716 strandings (705 cetaceans; 11 pinnipeds). There were four mass stranding events including: (1) 12 rough-toothed dolphins *(Steno bredanensis)*; (2) 12 short-finned pilot whales *(Globicephala macrorhynchus)*; and (3) 3 melon-headed whales *(Feresa attenuata)*. Of the strandings in the Southeast Region, there were 74 live strandings (~10%), 32 of which were taken into rehabilitation facilities. Of those successfully rehabilitated, six were released. Also noteworthy in the Southeast Region were six large whale strandings, including: two humpback whales *(Megaptera novaeangliae)*; two minke whales *(Balaenoptera acutorostrata)*; one fin whale *(Balaena physalus)*; and one northern right whale *(Eubalaena glacialis)*. In addition, the Southeast Region had an unusually high number of pygmy and dwarf sperm whale *(Kogia spp.)* and Cuvier's beaked whale *(Mesoplodon europaeus)* strandings at 51 and four, respectively. *For more information about these stranding events, contact Blair Mase at (305) 361-4586.*

Northwest. The Northwest Region experienced 371 total strandings in 1998 (44 cetaceans; 327 pinnipeds). Almost 1/3 of these were harbor seals, with California sea lions *(Zalophus californianus)* and harbor porpoise making up most of the remaining strandings. *For more information about these stranding events, contact Brent Norberg at (206) 526-6733.*

Southwest. The Southwest Region responded to the largest number of marine mammal strandings in 1998. Due to the El Niño weather event, California stranding networks alone responded to the highest annual number of strandings (mostly California sea lions) in over a decade (158 cetaceans; 3568 pinnipeds). The cetacean strandings included: harbor porpoises, common dolphins, and gray whales *(Eschrictius robustus)*. As reported in the *MMPA Bulletin* issue No. 12, "California Sea Lion Die-Off," stranding network participants on the central California coastline also responded to an "unusual mortality event" caused by a harmful algal bloom. *For more information about these stranding events, contact Joe Cordaro at (562) 980-4017.*

Alaska. Strandings in the Alaska Region consisted of 112 events (72 cetaceans; 40 pinnipeds). This included one mass stranding of 30 beluga whales *(Delphinaptera leucas)*. Other species frequently stranded in 1998 were: Steller sea lion (*Eumetopias jubatus)*, harbor seal, and humpback whale. *For more information about these stranding events, contact Kaja Brix at (907) 586-7235.*

NMFS Evaluates Take Reduction Team Negotiations

The MMPA Amendments of 1994 mandated a new process for reducing serious injuries and mortalities of marine mammals incidental to commercial fishing operations. The MMPA established take reduction teams (TRTs) to develop take reduction plans for those fisheries with the greatest impact on marine mammal stocks. The TRTs are made up of individuals who represent interested parties including commercial and recreational fishing industries, fishery management councils, interstate commissions, academic and scientific organizations, state officials, environmental groups, and National Marine Fisheries Service (NMFS) representatives.

The basic structure of the take reduction process involves several phases, each with a specific deadline. The initial phase involves negotiation by the TRTs where each team has six months to develop a draft take reduction plan through multi-party negotiation. The draft plan must be approved by all members on the team before being forwarded to NMFS. The other phases of the process include publication of the draft plan with proposed implementing regulations, a public comment period, publication of the final plan, and implementation/monitoring.

Five TRTs have been established to date, and each of those teams met between five to eight times during their negotiation phase. In an effort to improve the process, NMFS contracted with RESOLVE, a dispute resolution firm, to implement a mail survey to evaluate the initial phase of the process. RESOLVE sent the mail survey to all TRT members in the Summer and Fall of 1998, and the results of the survey have recently been compiled.

In general, participants felt that:

- The process was an effective resource management tool (86%),
- The negotiations had enough time (60%),
- They could express their viewpoints (69%),
- The plan incorporated their views (82%),
- The facilitators' performance was good or excellent (95%),
- The process was fair (78%),
- The process lacked sufficient data (68%), and
- The end results of the negotiation were not satisfactory (60%).

Satisfaction at the end of the process was correlated with the respondents' perception of having enough time, whether or not the team reached agreement, and whether or not they felt that their opinions were taken seriously.

The respondents had many concerns regarding the process including:

- NMFS' delay in plan implementation,
- Insufficient data for negotiation, and the
- Lack of ability for NMFS staff to represent the agency.

RESOLVE made several recommendations for NMFS to improve the process by:

- Involving the TRTs in the data generation and analysis phase of the process. This would help answer some of the TRTs data questions before negotiations begin, and it would also assist in fostering buy-in to the data through making the data analysis a more transparent process.

- Extending the process time lines to allow for more negotiation time. RESOLVE suggested that the allotted time was insufficient for some teams in their consensus decision-making.

- Clarifying NMFS' role at the negotiation table. NMFS should develop a policy regarding who sits at the table, their role, and authority to speak on behalf of the agency.

NMFS has initiated actions to improve the process based on the survey feedback and other suggestions. In particular, NMFS may be reducing the size of many teams to make team discussions more effective, while maintaining the balance of interests on each team. NMFS also plans to evaluate other phases of the process, discuss the findings with each TRT, and research techniques that are used in other resource management conflict resolution processes. NMFS intends to incorporate improvements to the process such that the original intent of negotiated rule-making in consultation with key stakeholders is optimized.

NMFS has posted a copy of the evaluation results on the Office of Protected Resources web site at http://www.nmfs.gov/prot_res/mammals/trtevaluation.html. For further information on this topic or to request a hard copy of the evaluation results, please contact Katie Moore or Vicki Cornish at (301) 713-2322.

NMFS Hears from Stakeholders

In the spirit of cooperation, stakeholders in marine mammal conservation issues are given the opportunity to use the MMPA Bulletin as a forum to express their views about working toward common goals. Guest authors from other government agencies, the fishing industry, or conservation groups may contribute, and letters written to NMFS by general constituents may also appear. The views expressed by the guest authors are solely their own and do not necessarily reflect NOAA's positions or policies.

Marine Mammal Take Reduction Teams: "The Good, The Bad, and The Ugly" by Rick Marks

The effectiveness of the MMPA's experimental Take Reduction Team (TRT) approach to managing marine mammal-fishery interactions is difficult to quantify and yet to be fully determined. Although still early in the process, commercial fishermen provide a unique perspective on the TRT process.

As one might expect, opinions run the gamut from the very positive to the outright incredulous. But even at it's very worst, the TRT allows for information exchange, provides a forum for constituent participation, and a chance to develop sensible alternatives. Without the TRT process we would be left with the nagging MMPA problems that brought us all here in the first place - management decisions based on data-poor, risk-averse, vacuum-packed models, and predetermined emotions suggesting that marine mammals are of higher value than harvesting food or the fishermen that do it for a living.

While I certainly cannot speak for all commercial fishermen, many have indicated the TRT process has some positive elements. Simply having the ability to convey directly the details of a particular fishery including regional fishing differences, specific gear parameters, seasonality, market fluctuations, fiscal and labor issues associated with proposed management ideas, and personal at-sea experiences and observations is perceived as being extremely useful and nonexistent during the pre-1994 MMPA process.

TRT discussions are fertile ground for commercial fishermen and others to brainstorm innovative techniques to reduce interactions. Acoustic deterrent studies, a network of regional disentanglement response teams, and a S-K grant proposal addressing bycatch reduction are pertinent examples.

TRT meetings also provide opportunity for groups with varying opinions the chance to share those views in a more informal setting. TRT negotiations operate under a set of general guidelines which define the "rules of the game" and within those parameters participants come to respect group integrity and a certain level of disclosure. Professional facilitators generally ensure the process is an open one and that all participants experience equal opportunity.

This is not to say the TRT process is not without problems. Fishermen are often times forced to choose between attending a 2-3 day TRT meeting and the only stretch of good fishing weather for that particular month. This common predicament places self-sustaining commercial fishermen at a distinct disadvantage as the vast majority of TRT participants are salaried individuals.

Arguably, this is the price one has to pay for a seat at the table. However, every attempt should be made to accommodate fishermen and others by holding meetings in coastal locations during more non-productive fishing periods. The responsibility for making the system as user-friendly and accessible as possible for stakeholders rests squarely with NMFS.

The concept of "best available data" regarding marine mammal stocks is particularly troublesome to many fishermen. Regional TRT's vary in the amount of data that is available to build reasonable conservation plans. The uncertainty inherent in data-poor instances is easily parlayed into extreme risk averse decisions to "err on the side of conservation." From a commercial fishing perspective, what is at issue is not necessarily leaning toward responsible conservation, but the combined lack of sound data and the degree to which we are risk averse remains a major issue.

NMFS is responsible for the difficult work of counting marine mammal noses from moving ships and airplanes. Admittedly, this is no easy task nor is it a sufficient excuse. Some stakeholders believe the 1994 MMPA amendments requiring assessments of each and every marine mammal stock will be sufficient to address the general lack of information. Commercial fishermen expect the comprehensive data from this new, highly-touted assessment program will remove some of the reliance on risk averse decision-making and be available for consideration by the TRT's in the near term. The pending TRT for East Coast bottlenose dolphin will be an excellent test for incorporating the new, more accurate information.

Finally, participants on each TRT develop and agree to a set of parameters by which members interact. For commercial fishermen, this entails sharing detailed personal information about fishing practices, interactions, fishing locations, gear descriptions, seasons, and market availability. In return, fishermen expect and deserve full disclosure of private, state and federal initiatives that relate to the TRT's efforts. Only through full cooperation will TRT's achieve the overarching goal of reasonable marine mammal protection through group consensus.

Rick B. Marks is a staff member at Robertson, Monagle and Eastaugh, a Washington, D.C.- based lobbying firm. He holds a Masters Degree in Marine Environmental Science/Coastal Fish Ecology, was a member of the Mid-Atlantic Harbor Porpoise TRT, and recently served on the Mid-Atlantic Fishery Management Council. Rick can be reached at: remarks@erols.com.

Activists Fined $59,500 in Sugarloaf Dolphin Release

Former "Flipper" dolphin trainer Richard O'Barry, and his associate Lloyd A. Good III, have been found guilty of violating the MMPA for releasing two captive dolphins off the Florida coast in May. These dolphins were not prepared to survive in the wild and, as a result, subsequently sustained life-threatening injuries. O'Barry, Good, and their respective corporate entities were ordered to pay civil penalties totaling $59,500.

On June 8, 1999, Judge Peter A. Fitzpatrick, a U.S. Administrative Law Judge, fined Richard O'Barry of Coconut Grove, FL; Lloyd Good III of Sugarloaf Key, FL; Sugarloaf Dolphin Sanctuary Inc. of Sugarloaf Key FL; and the Dolphin Project Inc. of South Miami, FL, with civil penalties of $40,000 for illegally "taking" by harassment and illegally transporting each of the dolphins. This amount represents the maximum penalty provided by law. The Sugarloaf Dolphin Sanctuary was fined an additional $19,500 for failing to notify the National Marine Fisheries Service (NMFS) prior to the transport of the dolphins.

"This decision sends a strong message that the abuse and abandonment of dolphins will not be tolerated."

Hilda Diaz-Soltero, Director, NMFS Office of Protected Resources

"This case involved the reckless and intentional release of two captive dolphins by overzealous activists who had not prepared the animals to survive in the wild," said NOAA prosecuting attorney Joel La Bissonniere. "We are very pleased with the judge's decision in this case. The judge's ruling supports our position that the release of captive dolphins to the wild needs to be conducted responsibly, in order to protect the health and welfare of the animals."

O'Barry and Good released the two dolphins, named "Luther" and "Buck," approximately six miles off the coast of Key West, FL, on May 23, 1996. The day after the dolphins were released, Luther appeared in a congested Key West marina with deep lacerations, approaching people, and begging for food. Buck, found two weeks after his release over 40 miles away, had similar deep lacerations and was emaciated (see *MMPA Bulletin* Issue No. 8, "What Should We Know Before We Free Willy" and No. 9, "Former Navy Dolphins Rescued in Florida Keys").

NMFS determined that the dolphins were in need of medical attention. With the help of members of the Southeast Marine Mammal Stranding Network, the U.S. Navy, the U.S. Coast Guard and the Florida Marine Patrol, NMFS successfully rescued the animals and provided veterinary care.

The two dolphins had been collected from the wild off the coast of Mississippi during the 1980s, and were in captivity for almost 10 years. They were initially in the U.S. Navy's marine mammal program in San Diego, CA, and were transferred to the Sugarloaf Dolphin Sanctuary in 1994 as part of a project that intended to return them to the wild. Although the Sugarloaf Dolphin Sanctuary obtained the necessary authorizations to have the dolphins on public display, a scientific research permit authorizing a release was never obtained or even requested prior to the release.

Releasing captive marine mammals to the wild can be hazardous to both the released animal(s) and wild marine mammal populations if conducted improperly and without appropriate safeguards. Issues of concern include: (1) the ability of released animals to adequately forage and defend themselves from predators; (2) any behavioral patterns developed in captivity that could affect the social behavior of wild animals, as well as the social integration of the released animals; and (3) disease transmission and/or unwanted genetic exchange between released animals and wild stocks. NMFS requires any marine mammal release to be conducted under a MMPA scientific research permit in order to protect the health and welfare of marine mammals. The MMPA scientific research permit is required to ensure that humane protocols be in place that maximize the release's chance of success, and provide for long-term follow-up monitoring and emergency contingency plans in case it is necessary to rescue a released animal.

"Releasing captive dolphins to the wild has been romanticized in recent years, and has been promoted as a noble pursuit. However, the injuries these dolphins suffered and their obvious dependence on humans highlights the need for any release project to be conducted responsibly and scientifically," said NMFS Office of Protected Resources' Director Hilda Diaz-Soltero. "This decision sends a strong message that the abuse and abandonment of dolphins will not be tolerated."

For additional information on this case or other harassment issues, please contact Trevor Spradlin or Ann Terbush at (301) 713-2289.

Judge Fines Panama City Boat Rental Company and Operator $4,500 for Illegally Feeding Dolphins

On July 15, 1999, Federal Administrative Law Judge Parlen McKenna upheld a $4,500 fine against a Panama City, FL boat rental company and its boat operator for illegally feeding wild dolphins. The incident occurred during a June 1998 excursion off Panama City's Shell Island and nearby jetty, a destination popular with residents and tourists for feeding the local dolphin population.

NOAA charged Hathaway's Boat Rentals, Inc. and vessel captain Thomas E. Rainelli with five counts of harassing or attempting to harass wild dolphins by feeding or attempting to feed the animals cigar minnows during a June 17, 1998 parasail boat trip. Hathaway's Boat Rentals, Inc. also sold the minnows that were used to feed the dolphins.

Ruling from the bench, Judge McKenna called the charges "serious," and upheld the NOAA charges and requested sanction of $4,500. The judge also ordered Hathaway's Boat Rentals, Inc. to post a federal "no dolphin feeding" sign and a poster on the grounds and counter of its facility. Hathaway's Boat Rentals, Inc. and Rainelli may divide the payment of the $4,500 penalty as they choose.

In addition, the judge found that Rainelli was operating under a U.S. Coast Guard license, and as such, charges will be brought against him in a separate proceeding for these violations since he was acting under the authority of his U.S. Coast Guard license.

"We are pleased that the charges were upheld and with the sanctions imposed by Judge McKenna," said Karen Antrim Raine, NOAA attorney in charge of the prosecution. "This case sends a strong message that it is a federal violation to feed wild dolphins. The Florida Marine Patrol did an outstanding job in making this case, and we are extremely appreciative of NOAA Law Enforcement for its investigation and NMFS' Office of Protected Resources for its support."

NOAA attorneys originally charged a total of $5,000 against four parties involved in the June 17, 1998 violation, but dismissed the case against Tropical Parasail and settled with boat crew member Chanti Hance for $500. Hathaway's Boat Rentals, Inc. and Thomas Rainelli chose not to settle and pursued the option of the civil hearing. The two parties have the option to appeal the ruling.

"We hope that commercial operators who take tourists out to view wild dolphins will do so responsibly by keeping a safe distance of 50 yards from the animals and by supporting the law prohibiting dolphin feeding," said Ann Terbush, chief of the Permits Division in the NMFS Office of Protected Resources. "For several years, we have included local communities in Florida, particularly Panama City, in our education campaign to prevent harassment and feeding of wild dolphins. Since most tourists do not know about marine mammal protection laws or how to view wildlife appropriately, it is imperative that professional tour guides and businesses abide by the law and educate their patrons."

For additional information about this case and the prohibition against feeding wild marine mammals, please contact Trevor Spradlin or Ann Terbush at (301) 713-2289.

Hawaiian Whale Watching and Research Operation Assessed $13,000 Civil Penalty for Permit Violations

NOAA has charged the Pacific Whale Foundation with seven civil violations under the MMPA and the Endangered Species Act.

NOAA assessed a civil penalty of $13,000 against the Pacific Whale Foundation (PWF) in a Notice of a Violation and Assessment (NOVA) for actions that occurred between January and May of 1998. The charges include one count of failing to allow inspection of research records by providing a federal agent with falsified documents; one count of unauthorized approaches to within 100 yards of humpback whales; three counts of failing to include various data resulting from their research efforts in their annual report; one count of allowing unauthorized personnel to operate a vessel during research activities; and one count of failing to keep complete and accurate records of research activities.

The case resulted from an investigation into PWF's research activities during the 1998 whale research season after the agency received information that the Foundation had begun its research without the required permit authorizations.

Scientific research permits to study whales, dolphins, porpoises, seals and sea lions are issued by NOAA's National Marine Fisheries Service for research projects that meet the MMPA definition of "*bona fide* scientific research." Scientists who receive a permit are required to document their research activities fully and accurately. If the validity of the data is in question and the research is not *bona fide*, then little if any scientific benefit to the animals can be realized. Further, for endangered species such as humpback whales, it is especially important that the animals are not harassed without appropriate justification.

Settlement negotiations between NOAA's Office of General Counsel and the Pacific Whale Foundation are currently underway. PWF may decide to either pay a penalty or have a hearing before an administrative law judge.

For additional information on this case, please contact Ann Terbush at (301) 713-2289, ext. 110, or Paul Ortiz, NOAA Office of General Counsel for Enforcement and Litigation, at (562) 980-4069.

NMFS Hosts Aquaculture Workshop

Aquaculture is a growing industry worldwide, with the United States' production having increased roughly 5-10% each year over the past decade. Fish are now farmed in every state and territory in the United States, and marine aquaculture is expected to grow significantly over the next ten years.

Unfortunately, marine aquaculture facilities can negatively impact marine mammals and marine turtles. There are documented cases of interactions between nearshore aquaculture operations and pinnipeds (seals and sea lions) on both the East and West Coasts of the United States, as well as around the world. These interactions include impacts to marine mammals from entanglement as well as economic losses to the aquaculture industry due to damaged gear. Interactions can also occur offshore. For instance, New Zealand's offshore aquaculture facilities have documented marine mammal entanglements. As marine aquaculture operations expand in the nearshore and offshore marine environment, it is likely that interactions with marine mammals and marine turtles will also increase.

To address this issue, the NMFS Office of Protected Resources sponsored the "Marine Aquaculture, Marine Mammals, and Marine Turtles Interaction Workshop" on January 12-13, 1999 in Silver Spring, MD. The purpose of the workshop was to bring together regional NMFS experts on marine mammals, marine turtles, and marine aquaculture operations to develop recommendations on specific guidelines and standards for aquaculture siting and operation in order to minimize adverse affects to marine protected species from nearshore and offshore aquaculture operations.

The two-day workshop began with presentations focusing on the status of marine aquaculture, marine mammals, and marine turtle interactions in the United States, technological management actions, and governmental oversight. Bob Iwamoto of the NMFS Northwest Fisheries Science Center began the proceedings by discussing aquaculture risk management in the U.S. Pacific Northwest. He described the risks of marine mammal interactions associated with various types of aquaculture facilities and provided potential management actions to reduce those risks.

Conrad Mahnken, a NMFS Fisheries Biologist, presented a video of a new net design that, in field trials, has reduced marine mammal interactions and entanglements. Laurie Allen from the NMFS Northeast Region followed by briefing the group on federal consultation requirements under Section 7 of the Endangered Species Act. The Section 7 consultations ensure that any federally authorized, funded, or implemented action is not likely to jeopardize the continued existence of an ESA-listed species or result in the destruction or adverse modification of designated critical habitat. Roger Gentry, of NMFS Office of Protected Resources, discussed the use of acoustic technology to deter marine mammals from interacting with aquaculture facilities. His presentation detailed how marine mammal hearing mechanisms work and provided several recommendations for more effective use of deterrent technology in the future (see *MMPA Bulletin* Issue No. 13, "Protected Resources Profile: Roger Gentry, PhD").

After the presentations, the participants formed working groups to discuss several issue areas including:

* Proper siting of aquaculture facilities to minimize marine mammal and marine turtle interactions,

* Effects of pinnipeds on aquaculture and methods to deter them from facilities,

* Risk of entanglement of marine mammals and marine turtles,

* Impacts of aquaculture facilities on marine species habitat,

* Recommendations for standards and guidelines to minimize the effects of aquaculture operations on marine mammals and marine turtles, and

* Identification of research needs and priorities.

The Office of Protected Resources is currently publishing the workshop proceedings, and copies will be available to the public.

For additional information about aquaculture and marine protected species interactions or to receive a copy of the proceedings when published, contact Donna Wieting or Katie Moore at (301) 713-2322.

Video on Right Whales and Ship Strikes Available

NMFS Northeast Regional Office recently produced a video on reducing ship strikes of right whales. Production of the 15-minute video, "*The Right Whale and the Prudent Mariner*," was funded by the Northeast Regional Office via the NMFS advisory group - the Northeast Implementation Team, in partnership with the: Canadian Department of Fisheries and Oceans; Gulf of Maine Program; International Fund for Animal Welfare; Massachusetts Environmental Trust; U.S. Coast Guard; and the U.S. Navy. The New England Aquarium, Center of Coastal Studies and the Northeast Fisheries Science Center provided footage and services-in-kind. The video explains the right whale's surface behavior, which contributes to their vulnerability to ship strikes. The ship strike problem and the need to educate mariners of this vulnerability is a major focus for both the Northeast and Southeast Implementation Teams. A plan is being developed to distribute the video to mariners using the major shipping ports along the eastern coast.

To obtain a free copy of this video, contact Sal Testaverde at (978) 281-9368.

The Working Group on Unusual Marine Mammal Mortality Events Holds its Annual Meeting

The Working Group on Unusual Marine Mammal Mortality Events held its Annual Meeting in Silver Spring, MD on March 25-26, 1999. The establishment of the Working Group was mandated under section 404 of the MMPA (see *MMPA Bulletin* issue No. 11, "Working Group on Unusual Marine Mammal Mortality Events Meets"). The major topics of discussion are described below.

Mortality Events. The Working Group had been consulted on five mortality events over the last year including two events designated as "unusual." Members of the Working Group discussed recent marine mammal mortality events, three occurring in U.S. waters and one in New Zealand. The first mortality event occurred from North Carolina to the West Coast of Florida from February 1998 to October 1998. During this period of time, there were 16 strandings of *Mesoplodon spp.* beaked whales found stranded in various stages of decomposition. Normally, this region only gets one or two *Mesoplodon spp.* strandings per year. Necropsies were performed on four of the animals, and there did not seem to be common pathological conditions among the findings.

The U.S. unusual mortality event concerned the stranding of over 70 seizuring California sea lions *(Zalophus californianus)* in northern and central California (see *MMPA Bulletin* Issue No. 12, "California Sea Lion Die-Off") as a result of a harmful algal bloom. Although comprehensive analyses of this event are ongoing, the histopathology results of samples taken from the animals indicate the presence of lesions in the hippocampus region of the brain, consistent with exposure to domoic acid produced by some algae species in bloom, and there is evidence of measurable biotoxin found in tissues. A full report documenting this event is currently in press.

There was also discussion of two rough-toothed dolphin *(Steno bredanensis)* mass strandings: one in 1997 (62 animals) (see *MMPA Bulletin* Issue No. 12, "Recent Stranding Events") and one in 1998 (12 animals). Significant number of individuals from both groups of dolphins had heart disease or heart-related maladies.

The final mortality event discussed involved large numbers of Hooker sea lions *(Phocarctos hookeri)* that stranded in New Zealand from January to February 1998. In some areas, there was up to 80% pup mortality and 20-30% mortality of adult females. The most common symptom in adult sea lions was a swollen region of the throat area that sometimes burst and drained. Unfortunately, a definitive cause for the event has yet to be determined. A report detailing this mortality event, "Unusual mortality of the New Zealand sea lion, Phocartos hookeri, Auckland Islands, January-February 1998," was published by the New Zealand Department of Conservation.

Causes of Mortality. The Working Group was also presented with information about the spread of disease, contaminants, harmful algal blooms, and other potential causes of mortality among marine mammals. A representative from the National Ocean Service's (NOS) Coastal Ocean Program presented a summary of NOAA's programs for monitoring and researching of harmful algal blooms. It was pointed out that algal blooms can produce a variety of toxins including paralytic shellfish poisoning, ciguatera, and *Pfisteria* to name a few, and that their effects on marine mammal populations are not well understood. NOS' programs involve algal bloom research, monitoring and assessment, event response, and outreach and training. Specifically, the programs' objectives include: isolating and characterizing the toxins produced, development of detection methods for both toxins and cells that produce toxins, providing research support for ecology and oceanography of algal blooms, and understanding the fundamental processes involved with algal blooms.

A brief overview of the Workshop on Effects of Persistent Ocean Contaminants on Marine Mammals, held on October 12-15, 1998 was also given. The workshop was convened to review the current body of known information and to identify gaps in information on the effects of persistent ocean contaminants on marine mammals (see page 10).

Another issue that was addressed by the Working Group was the vulnerability of Hawaiian monk seals *(Monachus schauinslandi)* to the spread of morbillivirus on the West Coast of the United States. The potential threat of morbillivirus (or any other disease) on an isolated, naive population of animals has raised concern for the Hawaiian monk seal recovery team. NMFS hopes that an ongoing health assessment program will shed light on the most challenging health threats facing the long-term survival of monk seals (see *MMPA Bulletin* Issue No. 14, "Safeguarding Hawaiian Monk Seals from the Threat of Plastic Debris." Other topics of discussion included the status of the Florida Manatee Contingency Plan and the upcoming reauthorization of the MMPA (see page 11).

For additional information about the Working Group on Unusual Marine Mammal Mortality Events, contact Dr. Teri Rowles at (301) 713-2322, ext. 178.

Harbor Porpoise Mortalities

Since the beginning of the year, there have been 221 harbor porpoise strandings reported on the East Coast. The previous annual record was 103 reported in 1977. At the request of the Marine Mammal Commission, NMFS initiated a consultation with the Working Group on Unusual Marine Mammal Mortality Events. The Working Group concluded that the mortalities did not meet the criteria for declaration of an "unusual" event because of multiple causes and a relatively high number of animals that showed evidence of human interaction. Therefore, an Onsite Coordinator was not appointed. Although the mortalities have dropped off significantly, NMFS will continue to closely monitor harbor porpoise mortalities on the East Coast and will work with the Smithsonian Institution later this year in the detailed analysis of the harbor porpoise carcasses from this event.

For additional information on this event, contact Dr. Teri Rowles at (301) 713-2322, ext. 178, Dana Hartley at (508) 495-2090, or Blair Mase at (305) 361-4586.

Workshop on Effects of Persistent Ocean Contaminants on Marine Mammals

A workshop was held in Keystone, Colorado, 12-15 October 1998, to review what is known, and what needs to be learned, about the effects of persistent ocean contaminants on marine mammals. Concern about the possible effects of anthropogenic compounds and trace elements has increased in recent years for two main reasons. The first is that disease outbreaks, involving marine mammals with high concentrations of organochlorines in tissues, appear to have occurred with increasing frequency. The second is that experimental and other evidence has shown that certain contaminants often found in the tissues of marine mammals have deleterious effects on reproduction and the immune system. Prompted by these and other contaminant-related concerns, the Marine Mammal Commission, the National Marine Fisheries Service, the Environmental Protection Agency, and the National Fish and Wildlife Foundation jointly organized and co-sponsored this international workshop, involving scientists from seven countries.

The workshop report is planned for publication by the Marine Mammal Commission in mid-March, 1999.* The report will contain extended abstracts of the plenary presentations, reports prepared by the working groups, and a list of principal findings and conclusions derived from the working group reports. The workshop concluded that there is good reason to be concerned that survival and reproduction in certain marine mammal populations may have been affected, and are being affected, by persistent contaminants.

The effects of contaminants may include morbidity, mortality, reproductive failure, immunosuppression, and endocrine disruption. Onset and severity of effects may vary according to exposure level, the animal species, age, sex, and general condition, and the presence of other contaminants (e.g., synergy, antagonism, *detoxification* by enzyme induction, etc.). Reproductive problems observed during the 1960s and 1970s in female California sea lions off southern California and female ringed and gray

Expertise of workshop participants included environmental toxicology, environmental chemistry, marine mammal health and husbandry, pathology and disease, physiology, immunotoxicology, marine mammal population dynamics and ecology, experimental design, environmental risk assessment, and wildlife epidemiology. The workshop objectives were to: (1) review and summarize the state of knowledge about the types and levels of potentially harmful persistent contaminants found in marine mammals, and about the known and potential effects of these substances on marine mammal health and population dynamics; (2) identify and rank in importance the critical uncertainties concerning the presence, levels, sources, fates, and effects of organochlorines, toxic elements, and other persistent contaminants on marine mammals; (3) outline research and monitoring programs needed to resolve the critical uncertainties as quickly as possible; and (4) assess how ongoing and planned research and monitoring programs should be restructured or expanded. The workshop consisted of a series of plenary addresses, each followed by a panel discussion, and deliberations and report preparation by four working groups. These working groups were organized to address the following topic areas: immunotoxicology, pathology, and disease; endocrinology and reproduction; risk assessment; and likely future trends.

seals in the Baltic Sea were associated with high body burdens of organochlorines. A study of captive harbor seals in the Netherlands published in 1986 demonstrated an association between impaired reproduction and exposure to organochlorines in the seals' diet. Other studies in the 1980s and 1990s suggested that organochlorines affect endocrine and immune function in some marine mammals. Beluga whales in the heavily polluted St. Lawrence River and seals in the Baltic Sea have various lesions strongly suggestive of contaminant effects. Die-offs of seals and small cetaceans in Europe and North America from disease (primarily morbilliviruses) during the late 1980s and 1990s evoked much public concern about the role of contaminants.

Although investigations of the links between disease outbreaks and contaminants based on studies of carcasses were inconclusive; they led to experimental studies with harbor seals in Europe showing organochlorines—linked effects on immunocompetence. Additional studies reviewed at this workshop added weight to the argument that organochlorines have immunosuppressive effects on marine mammals.

A consistent theme during the workshop was the need for multidisciplinary studies that integrate physiological, behavioral,

reproductive, clinical, pathologic, and toxicological data to evaluate the relationships of immune status, health, reproduction, and survival of individuals to population- and ecosystem-level trends. Such studies should be conducted on both wild and captive populations. Long-term research and monitoring programs are especially valuable and need to have a stable funding base.

Understanding of the subcellular mechanisms by which contaminants affect marine mammals can only be achieved through in vitro studies using marine mammal cell lines or through experimentation. Invasive experiments can use laboratory animals as surrogates for marine mammals, although variation in response among species means that results must be treated with caution. Therefore, establishment of dose-response relationships and response thresholds may require well-designed, nonlethal experimentation with marine mammals. To a considerable extent, model species that have been well studied and are readily available in captivity (e.g., California sea lions, harbor seals, bottlenose dolphins, and beluga whales) can be used to represent other related species, although extrapolation must be done judiciously. Because most marine mammals are exposed to multiple contaminants in nature, experiments need to include exposures to complex mixtures in addition to single chemicals. Indices of exposure or effects, often called “biomarkers,” can be useful monitoring tools. More biomarkers need to be developed and validated for marine mammals. The workshop emphasized the potential for major problems in the future with well-known contaminants, substances not yet identified by current analyses, and many “new” contaminants that are being developed or are already in production.

For additional information about this workshop and the effects of contaminants on marine mammals, contact Dr. Tom O'Shea at Tom_O'Shea@usgs.gov or Dr. Teri Rowles at (301) 713-2322, ext. 178. This article was reprinted, with permission, from the March 1999, Vol. 7, No. 1 issue of the "Marine Mammal Society Newsletter."

** Editors' note: This report, "Marine Mammals and Persistent Ocean Contaminants," was published by the Marine Mammal Commission in April 1999. To obtain a copy, you can contact the Commission at: 4340 East-West Highway, Room 905, Bethesda, MD 20814.*

Acoustic Workshop Report Available

As reported in the *MMPA Bulletin* issue No. 13, "Acoustic Workshop Held by NMFS," the Office of Protected Resources hosted a workshop on anthropogenic noise in the marine environment and its impacts on marine mammals. As a result of this workshop, a report has been published by the Office of Naval Research. This document, "Proceedings on the Workshop on the Effects of Anthropogenic Noise in the Marine Environment 10-12 February 1998," outlines the workshop topics of discussion. This document will hopefully serve as a reference in policy, legal, regulatory and management plans for dealing with this issue. This publication can be found on the Office of Naval Research web site at:

http://www.onr.navy.mil/sci_tech/engineering/onrtxaff.htm

For additional information about the acoustic workshop, please contact Dr. Roger Gentry at (301) 713-2322, ext. 155. To obtain a hard copy of these proceedings, please contact Dr. Robert C. Gisiner at the Marine Mammal Science Program of the Office of Naval Research at (703) 696-2085 or by e-mail at gisiner@onr.navy.mil.

Congress Holds MMPA Oversight Hearing

On June 29, 1999, the U.S. House of Representatives Committee on Resources, Subcommittee on Fisheries Conservation, Wildlife and Oceans, held its first oversight hearing for the reauthorization of the MMPA. Assistant Administrator for Fisheries, Penelope Dalton, testified on behalf of NMFS. Her testimony consisted of an overview of NMFS' role in administering the MMPA, NMFS' implementation of the MMPA Amendments of 1994, ongoing issues of concern, and MMPA provisions that have been difficult to carry out. Other witnesses before the Subcommittee included Marshall Jones of the U.S. Fish and Wildlife Service, Dr. Ron DeHaven of the USDA's Animal and Plant Health Inspection Service, and Dr. John Reynolds, Chairman of the Marine Mammal Commission.

The Subcommittee members asked questions of each of the witnesses about their testimonies and other MMPA-related topics including: the health status of bottlenose dolphin stocks on the East Coast, take reduction teams, lethal removal of pinnipeds, illegal feeding and harassment of wild dolphins, the recent Makah gray whale hunt, the recent Sugarloaf dolphin release enforcement case, among others.

Since its enactment, the MMPA has been reauthorized every three to six years. However, the MMPA Amendments of 1994 were by far the most comprehensive. They included the addition of sections 117 and 118 to reduce marine mammal interactions with commercial fisheries and section 120 to implement expanded authority for lethal removal in certain situations. The 1994 amendments also modified section 104 regarding NMFS oversight of captive marine mammals, and section 101(a) on the taking and deterrence of marine mammals, and added a new section 119. For a more detailed description of these amendments, see the *MMPA Bulletin: Sept., 1994* issue.

NMFS is currently in the process of developing recommendations for possible amendments to the MMPA and has been holding discussions on this with the NMFS MMPA Implementation Task Force as well as other NMFS national and regional representatives. NMFS plans to work with constituent groups on MMPA reauthorization issues. The next Congressional oversight hearing is expected to be held sometime this Fall.

For additional information on the MMPA Reauthorization, contact Donna Wieting or Nicole R. Le Boeuf at (301) 713-2322.

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From the Editors...

Marine mammal conservation and management issues have often been highly politically and emotionally charged. Perhaps this is because the momentum behind the enactment of the MMPA in 1972 came, in part, from the American public's outrage over the large-scale dolphin mortality in the tuna purse seine fisheries of the eastern tropical Pacific Ocean, the killing of harp seal pups in Canada, and worldwide commercial whaling. Although these issues were international in scope, they fueled enough of a controversial fire in the United States to support marine mammal conservation and protection in this country ever since. With the enactment of the MMPA, the U.S. political system has attempted to balance the needs and opinions of many groups from animal rights activists to scientists to fishers when acting on marine mammal issues. This is a daunting and often difficult task for managers who must try to incorporate diverse stakeholder viewpoints and interests into conservation plans and policies.

In the last few months, the U.S. House of Representatives' Subcommittee on Fisheries Conservation, Wildlife & Oceans has heard testimony regarding Steller sea lions, marine mammal health and stranding response, and the reauthorization of the MMPA (see page 11, "Congress Holds MMPA Oversight Hearing"). Continued focus on the MMPA Reauthorization is expected to last for the remainder of the year, and perhaps into the year 2000.

Like other Congressional hearings, marine mammal hearings can present a full spectrum of interests and issues through organized groups of individuals, lobbyists representing interest groups, and through testimony from concerned citizens. Through each of these means, stakeholders can communicate their opinions and concerns to their elected officials, in order to contribute to the legislative process.

This pulls Congress and managers in many directions on marine mammal topics. Often, the livelihoods of people who depend on the ocean compete with the needs of those living marine resources within its waters. As human populations on our coastlines continue to rise and our ocean resources are utilized more, there will certainly be increased competition between marine mammals and people, and conflicts will continue to be a concern.

As we approach the next millennium, our limited marine resources will surely become even more scarce. How the MMPA's protection of marine mammals in the future will differ from the last 25 years is up for debate, but one thing is certain: If success will be measured by how well the resources as well as the people that use them are protected, managers will need to consider disparate viewpoints from constituents and the best available scientific data, and will need the full support of the public to achieve long-term successful conservation.

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