ATLANTIC SCIENTIFIC REVIEW GROUP

04-06 January 1995
Woods Hole, MA
Meeting Summary

The Atlantic Scientific Review Group met at the Northeast Fisheries Science Center from 04-06 January 1995. Solange Brault, Joe DeAlteris, Jim Gilbert, Mike Harris, Bob Kenney, Jim Mead, Dan Odell, Andy Read, and Randy Wells were present from the SRG. Solange Brault, Joe DeAlteris, Bob Kenney, Dan Odell, and Randy Wells acted as rapporteurs; Andy Read served as spokesperson and chaired the meeting. Kathyrn Bisack, David Dow, John Nicolas, Debbie Palka, Dave Potter and Gordon Waring attended from NEFSC; Ben Blaylock and Larry Hansen were present from SEFSC, and Paul Wade (F/PR) provided advice from NMFS headquarters. Sharon Young (HSUS) attended the meetings as an observer.

The Group was welcomed by Fred Serchuk (NEFSC). Ben Blaylock reviewed the mandate of the Group and the relevant sections of the MMPA that pertained to the stock assessment process. Paul Wade described the activities of the other two SRGs and noted some recent clarifications of the stock assessment and PBR process.

The SRG reviewed all stocks of Atlantic marine mammals for which Stock Assessment Reports had been prepared. Many of the Stock Assessments were incomplete; SEFSC and NEFSC personnel indicated that, in many cases, analyses were ongoing and complete assessments should be available in the near future. In addition to advice on particular Stock Assessment Reports, the SRG also made several general recommendations for future assessments and outlined a suite of research priorities that would assist in the assessment process.

The SRG agreed to encourage Dr. Costlow to reconsider his resignation from the Group. If Dr. Costlow resigns, the Atlantic States Fisheries Commission will be contacted about a replacement member, preferably someone knowledgeable in coastal fisheries, general oceanography and/or marine ecology. NMFS will be requested to solicit nominations for an additional SRG member from Puerto Rico or the Virgin Islands, with the SRG to review the nominations. Dr. Wursig has been unable to attend SRG meetings to date; he will be contacted about his availability for future participation in the SRG. The next SRG meeting is tentatively scheduled for December in conjunction with the Biennial in Orlando. The agenda will include review of all newly available abundance and mortality data, review of the draft take reduction plans (scheduled for completion in September), and updates of the Stock Assessment Reports.

GENERAL RECOMMENDATIONS:

1. We identified several species as high priorities for focus by take reduction teams: harbor porpoise, common dolphin, beaked whales, bottlenose dolphins, pilot whales, right whale, and manatees. Recovery teams exist for right whales and Florida manatees and have been recommended for Antillean manatees; take reduction teams need not be formed for stocks that have a recovery team in place. In these cases, the recovery team should fulfill all of the responsibilities of a take reduction team.

2. The SRG also noted that assigning take reduction teams to fisheries that interact with several stocks may be a more effective strategy than assigning separate teams for those stocks (*e.g.* a single team should focus on interactions between beaked whales, common dolphins, bottlenose dolphins and the pelagic drift net fishery). We identified several fisheries as high priorities for take reduction teams: the Gulf of Maine sink gillnet, pelagic driftnet, mid-Atlantic coastal gillnet, and long-line.

3. With respect to hook fisheries where there is an incidental take of cetaceans, the SRG expressed concern about the definition of "serious injury " to the animal, and whether the F/V captain or the sea sampler/observer is able to determine the extent of injury or the final outcome of the injury. To be conservative, we **recommend** that all marine mammals released alive from these fisheries be considered mortally injured in the context of this assessment, and that research be conducted on the survival of hooked and released cetaceans.

4. There is still considerable concern about the definition of Zero Mortality Rate Goal (ZMRG). In particular, the SRG questioned whether the definition should be based on a biological reference point or a fishery-specific incidental take rate goal. The majority of the committee favor the biological reference, but question the arbitrary 10% value as the definition of "no significant impact". The minority favor a reference related to specific fishery goals, such as rates that are measured by some traditional metric of fishing effort (number of hauls, sets, etc.), in an attempt to reflect the intent of the MMPA to reduce incidental mortality to as near zero as possible, without affecting fisheries in an undue or adverse manner.

5. There is a general concern over the species identification in several genera of cetaceans (*Mesoplodon, Globicephala,* and *Delphinus*) involved in fisheries interactions. In addition, there is the likelihood of interactions involving sub-species, or populations that have not yet been identified. In general, the Stock Assessment Reports do not reflect these uncertainties in stock structure. We **recommend** that skin and tissue samples be taken from all carcasses examined by observers, and that the samples be preserved for genetic analysis. We also **recommend** that research be supported to develop techniques to identify marine mammals to the species level using genetic characteristics. In addition, there is separate question of the reliability of field IDs by survey observers for some problematic species (e.g. *Kogia*).

6. There is still some question about the classification of trans-boundary stocks, particularly if the U.S. portion of the stock is marginal relative to the size of the stock portion across the border. Trans-boundary (US-Canada, US-Mexico) stocks need to be clearly identified with a standardized method of handling the existence/lack of abundance and mortality data. We **recommend** increased US-Canadian cooperation for trans-boundary stocks, and that this co-operation be expanded to joint management, especially for harbor porpoise, harbor seal, and grey seal. Similar co-operation between the U.S. and Mexico is required for assessment of coastal stocks of bottlenose dolphins in the Gulf of Mexico.

7. The SRG **recommends** better coordination between the NMFS Northeast and Southeast regions - particularly in the development of joint survey designs, pooled abundance estimates, and collaboration in the preparation of Stock Assessment Reports for species with ranges in both regions along the Atlantic coast.

8. Increased emphasis is required on the assessment of fisheries interactions that are not currently included in the Stock Assessment Reports. The SRG **recommends** centralized documentation of fishery data, including location, season, and level of effort, etc. At the present time it is not possible to assess the true impact of fisheries interactions with marine mammals because we do not yet have a complete list of fisheries that might be involved in such interactions. We also **recommend** better state/federal cooperation/coordination in relation to small-scale coastal fisheries, which can be widespread and may have large potential impacts on marine mammal populations.

9. We **recommend** that all new fisheries in high-use marine mammal habitats (e.g. experimental mid-water fisheries in shelf-edge regions) be automatically classified as Category 2 rather than Category 3.

10. The SRG **recommends** that better use be made of stranding data to identify potential fisheries problems and to target particular areas and times for monitoring effort. This might include funding support for efforts to make stranding data available on-line via the Internet, or increased training for stranding network volunteers. Standardized programs to identify fishery-related mortalities should be implemented in the stranding network.

11. The SRG **recommends** that additional observer effort should be assigned to fisheries which are currently inadequately covered, particularly in cases where the fishery type and/or location has a previous history of incidental takes (e.g. the mid-Atlantic squid/mackerel/butterfish fishery).

12. Correction factors have not been applied uniformly to all stocks. We **recommend** that Stock Assessment Reports should point out when correction factors are not available or have not been applied and that in these cases, the abundance estimates are therefore underestimates. Correction factors from other surveys can be applied, where appropriate, as noted in the PBR guidelines, but need an associated estimate of CV.

13. The SRG identified several information needs for further review of the Stock Assessment Reports, including: plans for observer coverage, plans for fishery interaction reduction research, plans for other biological research, changes in amount or distribution of fishing effort due to closures, buy-outs, additional regulations, etc. Where appropriate, these are discussed under specific Stock Assessment Reports.

14. All species seen in the Gulf of Mexico also occur in the Atlantic EEZ, so an assessment for these species in the Atlantic should be done. The SRG **recommends** that such species should be included in this report, with unknown PBR's.

PRIORITY RESEARCH RECOMMENDATIONS:

1. Research is required to elucidate bottlenose dolphin stock structure, including: photoidentification, genetics, telemetry, and the collection and analysis of distributional data. Liaison or coordination with members of the Atlantic Dolphin Research Coalition is necessary. The SRG **recommends** development of a centralized photo-ID catalog modeled on the New England Aquarium right whale catalog.

2. A variety of research is required to improve our understanding of beaked whale stocks, including: collection and analysis of genetic and skeletal samples of all incidental takes, biopsy sampling from sighting surveys, and investigation of the utility of species identification and survey methods using acoustic recordings.

3. The SRG recommends increased collection and analysis of data on the age, reproductive status and genetics of animals killed incidental to commercial fishing operations. Observers should take photographs of incidental takes whenever possible, especially of animals released alive and possibly injured. We further **recommend** that the practice of cutting open unsampled carcasses so they sink be discontinued. All carcasses should be tagged so that biological samples might still be taken if the carcass strands. Additional funding for retrieval of carcasses is needed.

4. The SRG **recommends** that correction factors be developed for species where they do not currently exist, especially for deep-diving cetaceans.

5. NMFS needs to further address the problem of mortality in animals 'taken and released alive'. Review of log-book information would be a logical first step in this process. An appropriate tagging protocol should be developed to tag such animals for studies of their survival after release.

6. The SRG encourages the development of tools to verify the field identification of *Kogia* and pilot whales.

7. The SRG **recommends** further study of other potential human-induced mortality. In particular, it would be extremely useful to summarize and centralize data on contaminant loads, particularly in coastal

species, such as bottlenose dolphins. Analysis of contaminant ratios would also help in stock delineation. The question of mortality due to epizootics (such as morbillivirus) should also be further explored, especially with coastal *Tursiops*, as this may be a significant factor in the demography of several stocks.

A. NORTHEAST MARINE MAMMAL STOCKS

In addition to examining Stock Assessment Reports from the NEFSC, the SRG also reviewed survey plans for 1995 in the northeast. D. Palka reviewed plans for July, August, September ship and aerial surveys. CITES and MMPA permits for skin biopsies are in hand. Surveys will probably include acoustic monitoring for harbor porpoise. Harbor porpoise and beaked whales will be the primary target species pending a review of the 1994 kills. Surveys include some counts of turtles and seals and documentation of human activities. Plans for 1996 include a comprehensive northeast-southeast survey of slope and offshore waters.

Harbor Porpoises

This is a thorough assessment that accurately reflects current knowledge of the status of this stock. D. Palka noted that possible reasons for inter-year discrepancies in abundance estimates are being examined. Significant results from general additive models indicate that relationships between harbor porpoise distribution, distribution of fish stocks, and water temperature exist for small patches of water. These relationships may explain inter-annual differences in distribution but do not explain such differences in abundance estimates. More work is needed, and another large-scale survey will be conducted this summer.

K. Bisack noted that drop-out of porpoises in the sink gill net fishery has been a problem for evaluating mortality. Below-waterline drop-out cannot be quantified, but we do know that estimates of mortality are negatively biased because they do not incorporate this factor. Current observer practice of watching all tows minimizes undocumented drop-out at or near the surface.

There have been recent changes in the rigor of data acquisition from ground fisheries in the form of mandatory log book data. This new system is undergoing implementation difficulties, so 1994 fishing effort data are not yet available. It remains to be seen whether the quality/reliability of the data will be improved over the voluntary log book system. If it appears that the new system will complicate future data collection, the system should be revised or re-evaluated.

Preliminary results from observers aboard sink gill net vessels in the mid-Atlantic region are that there has been no documented mortality, but there has been less than 1% coverage at this time. Other coastal fisheries have not yet been monitored, but are known to take porpoises, as indicated from stranding records. These fishing activities may be spatially and temporally discrete, and probably will not be covered by current NMFS observer programs; it might be possible to monitor these from shore. These are short-lived poorly documented fisheries and effort measures are not standardized from state to state. The Atlantic States Marine Fisheries Commission may provide some means of coordination in the future, but they do not meet until May, after the next porpoise exposure to the fisheries.

The fact that porpoises represent a trans-boundary stock presents significant complications to the assessment and management of this stock. All pertinent published data, Canadian and US, should be presented in the report if this is considered to be a single stock. The data should be broken out by country, but evaluated together.

SRG Recommendations:

1. In PBR calculations, the recovery factor should be changed to 0.50 from 0.65.
2. A statement to the effect that there is likely an unknown drop-out that may negatively bias mortality estimates should be included in the report. In this regard, NEFSC Reference Document 94-24 and the Bravington and Bisack (draft) manuscript on sink gillnet bycatch in the Gulf of Maine should be cited.
3. Small-scale coastal fisheries in the mid-Atlantic states need to be monitored by observers.
4. Data on the age/sex composition of the incidental take of harbor porpoises in the sink gill net fishery are available, and should be incorporated into the report.

5. The level of human-caused mortality is "high." The term "medium" should be deleted from the report.
6. Published Canadian estimates of abundance, human-caused mortality, and their precision should be included in the report.
7. A "Zero Mortality Rate Goal" paragraph needs to be added to the report.
8. This is a strategic stock

Right Whales
1. The best (and minimum) population size estimate, based on photo-ID census of extant whales, is 295 whales. This value should be used, and the "325-350" estimate which includes all animals in the catalog (including known dead whales) should be deleted.
2. Rmax should be the measured value of 2.5% instead of the default of 4.0%. This value was obtained by back-stepping through the catalog and calculating the average change from year to year. The value of 3.8% obtained from aerial surveys in the Great South Channel should not be used in PBR calculations because the estimate includes other factors of unknown precision.
3. Mike Harris has an additional catch-release record that should be included.
4. It would be of value to include a brief summary of the history of takes of this (and other species) to provide perspective on status relative to OSP.
5. This is a strategic stock.

Humpback Whales
1. The SRG considered CETAP data too old to provide usable population size estimates for PBR calculations. Data from several more recent surveys are being evaluated, but it will not be possible to pool data from these surveys to provide coverage comparable to CETAP. The CETAP data should be presented in the text, but no formal PBR should be presented. Therefore, the status of this stock is "unknown."
2. The default Rmax of 4.0% should be used because of questions raised about the 9% value presented (*i.e.* the estimate of Rmax is higher than the observed birth rate). Project YONAH is addressing some of the biases, but the results will not be available for 12-18 months.
3. Published directed takes in the Caribbean and incidental takes in Newfoundland should be included. The potentially high level of human impact should be noted. The stock is strategic for multiple reasons -- lack of PBR, endangered.

Fin Whales
1. No recent abundance estimates are available, so the PBR defaults to "unknown."
2. The default Rmax value of 4% is applicable.
3. This is a strategic stock (ESA status).

Sei Whales
1. No recent abundance estimates are available, so the PBR defaults to "unknown."
2. The default Rmax value of 4% is applicable.
3. A record of a recent ship strike needs to be added (Jim Hain).
4. This is a strategic stock (ESA status).

Minke Whales
1. No recent abundance estimates are available, so the PBR defaults to "unknown."
2. The default Rmax value of 4% is applicable.
3. Recent survey data for the Gulf of Maine should be provided. D. Palka indicated that 2500 whales (CV = 35%) were estimated to reside in the coastal waters of this area during summer. Abundance estimates from other areas, such as Cape Hatteras to Key West, are lacking and represent an important data need.

Blue Whales
This assessment is satisfactory as it stands; the stock is strategic (due to ESA listing). The following reference on recent trends in abundance should be added: Sigurjonnson, J. & Gunlaugsson, T. 1990. Recent trends in abundance of blue (*Balaenoptera musculus*) and humpback (*Megaptera*

novaeangliae) of east and southwest Iceland, with a note on occurrence of other cetacean species. Rep. Int. Whal. commn. 40: 537-551.

Sperm Whales
1. Population size estimate based on old CETAP survey, new abundance estimate forthcoming, therefore PBR defaults to unknown.
2. Delete the sentence regarding foreign fishing activities.
3. The stock is strategic (ESA status).

Killer Whales
No comments

Harbor Seals
1. In the section on Current Population Trend, delete the statement regarding the availability of additional haulout sites.
2. In the Other Mortality section note the potential for mariculture-related deaths in Maine and Canada.
3. Recovery factor should be 1.0, vice 0.5.
4. Strandings of seals occur year around, vice in the winter.
5. The SAR needs a section on ZMRG.
6. This is a trans-boundary stock; pertinent published Canadian information should be added.

Gray Seals
1. Recent population estimates: 500 in Maine and 2000 in Cape Cod, therefore total population estimate is 2500.
2. Population trend is "increasing" not "unknown".
3. Potential mariculture interactions exist in both Maine and Canada.
4. As for harbor seals, the recovery factor should be 1.0, vice 0.5
5. This is a trans-boundary stock; pertinent published Canadian information should be added.

Harp Seals
1. The SRG entertained some discussion as to the need to include this species due to the marginal nature of its occurrence. Our final decision was to include it, and note the population of perhaps 3,000,000 harp seals in Canada is very large relative to the 30-40 seals taken in the sink gillnet fishery.

Hooded Seals
1. As for harp seals, this stock has a very marginal occurrence in U.S. waters.
2. No fishery interactions were noted.

Beaked Whales (*Mesoplodon* spp.)
1. The SRG noted the difficulty of identifying the four species within this genus, but recommends that four separate stock assessments be included in the report, with an introduction that describes the species identification problem.
2. With respect to the 17 unidentified kills, it is recommended that they be included in each assessment.
3. As noted previously, it is recommended that research be conducted on methods to identify species of marine mammals using genetic characteristics.
4. For each stock, population size will be unknown, therefore PBR=0, and each stock will be strategic.

Cuvier's Beaked Whale
1. A revised population estimate is forthcoming.
2. Delete reference to goosebeaked whale.

Common Dolphins
1. The SRG noted our limited knowledge of population structure, and the existence of possible species, sub-species or separate populations of common dolphins in the NW Atlantic. J. Mead described a high variance in skull measurements that might suggest the existence of more than a single species.
2. Delete reference to saddleback dolphins.
3. Given the small number of trips and the relatively high by-catch rates, the SRG recommends 100% coverage of the swordfish driftnet fishery.
4. Revised population and kill estimates are forthcoming; these may result in a designation of a strategic stock.

Risso's Dolphins
1. A revised population estimate is forthcoming.

Pilot Whales
1. The SRG noted general concern over the classification of serious injury in the longline fishery (see above) . We do not believe that observers are able to determine the potential for survival of hooked or entangled animals. Thus, to be conservative, we recommend that all animals released alive be considered takes and count against the PBR.
2. Observer coverage should be extended to the Southern New England squid, mackerel and butterfish mid-water trawl fishery.
3. Skin and tissue samples should be taken from carcasses for future genetic analysis to differentiate between short and long-finned pilot whales.
4. This is a strategic stock.

Spinner Dolphins
1. The SRG expressed general concern about the adequacy of stock assessments for *Stenella* spp. We note that these stocks will not be adequately surveyed in 1995, and the Group recommends that an appropriate survey be planned for the future.

Spotted Dolphins
1. The SRG expressed concern over confusion between *Stenella frontalis* and *S. attenuata*. A recent fishery bycatch of six spotted dolphins sent to the Smithsonian were *S. attenuata*, not *S. frontalis* as indicated.
2. We suggest separate Stock Assessments for each species with an introduction noting the difficulty in species identification.

Striped Dolphins
1. Delete reference to the Gulf of Maine in the trawl fishery description.
2. No recent abundance data exist, therefore PBR is unknown.

White Sided Dolphins
1. No recent abundance data exist, therefore PBR is unknown.

White Beaked Dolphins
1.No records of fishery interaction, thus we recommend that this is not a strategic stock.

SOUTHEAST STOCKS

R. Blaylock reviewed stock boundaries and definitions for bottlenose dolphins and current SEFSC survey strategies for the Gulf of Mexico. These survey strategies include a 20% CV goal. It was noted that bottom topography and commercial fisheries vary considerably across the Gulf. The SRG agreed with the assumption that dolphins in bays and sounds are 'resident populations' and that this

is a conservative approach to assessment of these stocks. New, revised stock assessments include stocks of *Tursiops* in slope waters. From preliminary mitochondrial DNA studies, the dolphins in the slope waters in the Gulf appear to be different from the coastal dolphins in the Gulf but similar to the Atlantic 'offshore' ecotype. Distributional data for Gulf dolphins also suggest a stock separation. Additional genetic work is underway. The GULFCET data set will be available later in 1995 for incorporation into the bottlenose dolphin population estimates. A survey cruise was completed in the Gulf of Mexico in 1994, and some new abundance estimates are given below

Assessment of bottlenose dolphin stocks remains problematic. There appears to be (i) coastal residents, (ii) coastal migrants, (iii) an offshore ecotype and possibly (iv) bay/estuary forms, such as the Indian River lagoon stock. It is unclear how the 'depleted' coastal migratory stock should be separated from these other forms for the purposes of the stock assessment reports. In general, there is a lack of data on *Tursiops* in southeastern U.S. Atlantic waters, compared with those in the Gulf of Mexico. The SEFSC goal is to eventually have comparable data from both regions, which will include bay/estuary stock assessments. At the present time sufficient data exist only for the Indian River lagoon. Only winter survey data are available south of Cape Hatteras. In the Stock Assessment Reports, the basis for *Tursiops* stock delineation should be clearly identified and problems associated with stock identification noted at this stage of the process. The mid-Atlantic coastal stock situation is particularly complex and sufficient data are not yet available to delineate stocks clearly in this area.

Mid-Atlantic *Tursiops* stocks

1. The stock situation is complex, as indicated above.
2. North of Cape Hatteras, stocks can be delineated on basis of distribution. South of Cape Hatteras only winter 1992 data exist. Another population survey will be performed in 1995.
3. The Report should include reference to drift gillnet fishery takes.
4. Genetics/hybrids - skulls examined by SI show no evidence of hybridization between offshore and coastal types as suggested by limited data on hemoglobin electrophoretic profiles.

Gulf of Mexico Outer Continental Shelf *Tursiops* stocks

1. These are deep water stocks, with stock definition based solely on geographic area and survey design blocks. We suggest lumping Western, Northern and Eastern OCS slope 'stocks' for purposes of assessment, as was done for the revised stock assessment.
2. The location of fishery effort should be examined and stock definitions should be revised if/as appropriate.
3. Include information on distribution of effort in the shrimp trawl fishery, longline fisheries, menhaden purse seine fishery; butterfish fishery - any fisheries that may interact with marine mammals. Problems exist because states do not record fishery information in a uniform manner and fish taken in waters of one state may be 'landed' in another state. Information on where fish were actually taken is often not available.
4. Strike 'If fishery self-reporting is ...' in all stock assessments.
5. Use whole numbers in Zero Mortality Rate Goals and elsewhere in the Reports.
6. A stock definition chart should be included in each account and the distribution of the particular stock under discussion should be indicated.

Gulf of Mexico Continental Slope *Tursiops* stocks

1. Mitochondrial DNA analysis indicates this stock is closer to the Atlantic 'offshore' ecotype than to Gulf of Mexico coastal stocks.
2. Add longline fishery observer data for this stock.

Western Gulf of Mexico coastal *Tursiops* stock

1. The trans-boundary question for coastal (also shelf and slope) stocks of this species should be addressed in the Report.
2. Include reference to *Tursiops* killed in Texas experimental turtle nets.

3. Include mention/reference to anomalous mortality events.

Northern Gulf of Mexico coastal *Tursiops* stock
1. Delete numerical estimates of numbers of dolphins killed from Reynolds reference, as it is outdated.
2. Review live capture statistics to determine if any animals were removed from this stock.
3. Check recent stranding data re: level of human-related takes.
4. Delete 'other mortality' as it speculates about human coastal impacts, pollution, etc., in this account and in all others where it occurs without supporting data.
5. Are there any undocumented fisheries in this area that interact with *Tursiops*?

Eastern Gulf of Mexico coastal *Tursiops* stock
1. It is not appropriate to assume that habitat use patterns from Florida are also appropriate for areas in the northern and western Gulf.
2. Clarify references to Sarasota, Charlotte Harbor, and Tampa Bay data/population trends.
3. Note that recent summer counts in Mississippi Sound are lower than historic counts.
4. N-min and N-best: replace estimates in tables where better data are available (e.g. Sarasota Bay).
5. Include information on live-capture removals and note any outstanding collecting permits.
6. As appropriate, include references on contaminant loads, health scores (cf. Matagorda Bay).

Mid-Atlantic Offshore *Tursiops* stock
1. Add recent survey data.
2. NEFSC and SEFSC personnel should collaborate in revising this stock assessment, particularly with fishery by-catch data.
3. The CMC citation should be replaced with a primary source.

Mid-Atlantic Coastal *Tursiops* stock
1. Add information on incidental take in shrimp trawls.
2. Add east coast Florida shark gillnet observer data.
3. Stock definition remains problematic (see above).
4. Qualify use of numbers in minimum population estimates (minimum counts).
5. Note population estimate derived by Ed Mitchell from historical fishery data from Cape Hatteras.
6. Note that a summer 1995 survey is planned north of Cape Hatteras.
7. Consider directed biopsy study as a way to separate stocks in the overlap area.
8. Identify source of last sentence on page 22.
9. This is a strategic stock (MMPA status).

NORTHERN GULF OF MEXICO STOCKS

Sperm Whales
1. New numbers: Nbest = 530 (CV=.364), Nmin = 403
2. Marine Mammal Commission suggests that Atlantic and Gulf of Mexico stocks should be pooled. There was some disagreement about this in the SRG; we decided to keep them separate.
3. This is a strategic stock (ESA status).

Bryde's Whales
1. New numbers: Nbest = 35 (CV=1.0959), Nmin = 15
2. Highest sighting rates of *Balaenoptera* in Gulf of Mexico are of this species; but only 3 sightings in 5 survey years (spring and summer surveys: they may be there at other times of year)
3. Individuals seen in Gulf of Mexico may be from the Caribbean stock
3. This is not a strategic stock, because there are no records of human-induced mortality.

Cuvier's Beaked Whales
1. New numbers: Nbest = 30, Nmin 19

2. Not a strategic stock because there are no records of human-caused mortality.

Blainville's Beaked Whales
1. Surveys have recorded only one confirmed sighting (in 1992), but no estimate of Nbest, so no estimate of PBR can be made.
2. This is not a strategic stock, because no fisheries interactions have been documented.

Beaked Whales (Ziphiidae)
1. All species should be assessed separately, i.e. four separate stock assessments
2. Strike out "beaked whales have been taken in the US Atlantic drift gillnet fishery". because it does not relate to Gulf of Mexico stock.
3. It should be pointed out that there have been no assessments for beaked whales spp.
4. Identification at sea is problematic in this genus.
5. No human-induced mortality, so none of the beaked whale stocks are strategic

Atlantic Spotted Dolphins
1. New numbers: Nbest 3213 (CV=.4439), Nmin = 2177.
2. This stock is of unknown status, and 2 individuals were taken (& released alive) in longline fishery in Gulf of Mexico.
3. RF should be 0.5, rather than 1.0.
4. Abundance estimate is probably an underestimate because it does not include the continental shelf area, where this species has been observed.
5. There have been documented takes, and there is only a partial abundance estimate, thus no PBR estimate can be made, so this should be a strategic stock. This status can change in near future with incorporation of other survey data.

Pantropical Spotted Dolphins
1. New numbers: Nbest = 31220 (CV = .2014), Nmin = 26083.
2. There are species identification problems for fisheries observers, so the total number of takes are unknown; one taken in long line fishery may be this species.
3. This stock should be given "unknown" status, so RF = 0.5.
4. This is not a strategic stock.

Striped Dolphins
1. New numbers: Nbest = 4858 (CV=.4433), Nmin = 3293.
2. There have been no documented takes, nor any strandings classified as fisheries interaction, so RF remains at 1.0.
3. This is not a strategic stock

Spinner Dolphins
1. New numbers: Nbest = 6316 (CV=.4277), Nmin = 4336.
2. No observations of fisheries-related mortality have been recorded, so this is not a strategic stock.

Rough-toothed Dolphins
1. New numbers: Nbest = 852 (CV=.4277), Nmin = 4336
2. No takes have been observed, so this is not a strategic stock.

Clymene Dolphins
1. New numbers: Nbest = 5571 (CV=.3687), Nmin = 4015
2. This is not a strategic stock

Fraser's Dolphins
1. New numbers: Nbest = 126 (CV=.8969), Nmin = 63.

2. This assessment is based on only a single sighting in one survey.
3. RF should be set at 1.0 because there is no evidence of any fishery interaction.
4. The northern Gulf of Mexico is probably the northern edge of this stock's range.
5. This is not a strategic stock

Killer Whales
1. New numbers: Nbest = 277 (CV= .4193), Nmin = 191.
2. It should be noted that preliminary data on individual photo-identification exists.
3. This is not a strategic stock

False Killer Whales
1. New numbers: Nbest = 381 (CV=.6195), Nmin = 226.
2. This is not a strategic stock

Pygmy Killer Whales
1. New numbers: Nbest = 518 (CV=.8088), Nmin = 270
2. This is not a strategic stock

Dwarf Sperm Whales
1. New numbers: Nbest = 341 (CV=.308), Nmin = 259
2. This is not a strategic stock

Pygmy Sperm Whales
1. The SRG again raised the problem of differentiating the two *Kogia* species at sea and noted that the Pacific SRG pooled the assessment of these two species.
2. *K. simus* seems to be the more southern species. Of the 60 total sightings of this genus in the Gulf of Mexico, 30 were *K. simus*, 10 were *K. breviceps* and the rest were unknown.
3. The ability of field observers to make identification of these species was questioned by the SRG, and should be verified.
4. The population abundance estimate for this region should be of the two species pooled. However the two species should have a separate assessment; in this case, there is no abundance estimate for either stock, thus no PBR can be estimated.
5. D. Odell reported a record of a stranded *Kogia* specimen that had been shot.
6. One record of possible human-caused mortality exists for *K. breviceps*, so this should be considered a strategic stock.

Melon-headed Whales
1. New numbers: Nbest = 3965 (CV=.3857), Nmin = 2817
2. This is not a strategic stock.

Risso's Dolphins
1. New numbers: nbest = 2749 (CV = .2725), Nmin = 2150
2. No assessment was made for the Atlantic stock of this species.
3. Known takes exist for this stock. In the longline fishery (including the Atlantic region): 76 in 1992 and 49 in 1993.
4. This is a strategic stock, because takes have been recorded, and no estimate for population size exists outside the Gulf of Mexico, even though there are known takes there.
5. One cited reference is missing from the text.

Short-finned Pilot Whales
1. New numbers: Nbest = 353 (CV=.5239), Nmin = 225
2. This is not a strategic stock

ATLANTIC EEZ STOCKS

Short-finned Pilot Whales

1. Some individuals taken in the Atlantic region may be mis-identified as long-finned pilot whales. Tissue samples should be taken by observers whenever possible for identification.
2. 52 animals were observed taken in the longline fishery alone (including the Gulf of Mexico); the total for all fisheries was 263 in 1993.
3. This is a strategic stock.

Pygmy Killer Whales

1. Only one sighting (off-effort) was made during the last survey, so no abundance estimate can be made.
2. No known takes have been recorded, so this is not a strategic stock.

USFWS ASSESSMENTS: MANATEE STOCKS

West Indian Manatee Florida Stock

1. The SRG recognizes that NBS must rely on other data for stock assessments. This assessment is based on data from the Sirenia Project.
2. A recovery team exists for this stock; extensive documentation of human-induced mortalities will soon be available.
3. All SRG requests and reports should be forwarded to: Robert O. Turner, Manatee Coordinator, USFWS, 6620 Southpoint Dr. South, Suite 310, Jacksonville, FL33216
4. There was some discussion about the use of a default Rmax value (0.04) for this stock. The present estimate of population growth rate is 0 (Marmontel 1994), but this is not an estimate of Rmax as it includes the heavy human-induced mortality.
5. Most manatee mortalities are caused by: recreational boats and gate-lock interactions. The summary of mortalities for 1993 are a total of 192 killed, of which 70 were human-induced.
6. The calculated PBR is 3.7, using a RF of 0.1. At present, however, no incidental takes are allowed under the ESA. The group agreed that a PBR of 3 should be retained (as opposed to 0), because it is a quantitative estimate, and its very low value supports the concept of protection for this stock in order to achieve a recovery. The SRG noted that the current human-induced mortality greatly exceeds the PBR.
7. This is clearly a strategic stock.
8. The most current (1993-94) information on human-caused mortality should be incorporated into this report.
9. An aerial survey is planned for 1995 along both coasts.
10. The Marine Mammal Commission suggests separation into an east coast and Gulf coast stocks. From genetic studies there is no significant differentiation between individuals from the two regions, but there is probably little actual exchange. The stocks in each region are apparently of similar size, but mortalities may be higher on the east coast. This potential difference in mortality rates should be assessed, and if there is a distinct difference in mortalityrates between the Atlantic and Gulf coasts then two stocks should be assessed separately.

Antillean Manatees

1. No recovery team currently exists for this stock, although there is a recovery plan.
2. Little is known of the level of mortalities in Puerto Rico, although there are known takes.
3. The PBR is 0, so this is a strategic stock.
4. The recovery plan needs to be updated, and a take reduction team appointed.