**MEETING OF THE PACIFIC SCIENTIFIC REVIEW GROUP**
**SOUTHWEST FISHERIES SCIENCE CENTER, LA JOLLA, CA**
**15-17 OCTOBER 1997**

The sixth meeting of the Pacific Scientific Review Group (SRG) was held at the Southwest Fisheries Science Center in La Jolla, CA on 15-17 October 1997. All Pacific SRG members were in attendance with the addition of newly appointed member, Chuck Janisse. Also participating were Jay Barlow, Meghan Donahue, Barb Taylor, Andy Dizon, Mark Lowry, and Grant Cameron from the NMFS Southwest Fisheries Science Center, Scott Hill from the National Marine Mammal Laboratory in Seattle, WA, Carl Benz of the US Fish and Wildlife Service, Joe Scordino of the NMFS NW Regional Office, and Irma Lagomarsino of the NMFS SW Regional Office. Meghan Donahue and Michael Scott served as rapporteurs. Participants and observers are listed in Appendix 1, background documents provided to the groups are listed in Appendix 2, and the agenda of the meeting is in Appendix 3. The meeting was chaired by Robin Brown.

Robin Brown opened the meeting and welcomed Chuck Janisse as a new member of the Pacific SRG.

## GENERAL COMMENTS

The SRG noted some changes that should have been made in the minutes of the joint meeting with the Alaska SRG. The suggested changes are bracketed in the version accompanying the Pacific SRG's May 1997 minutes. In future, the Pacific SRG recommends that minutes of joint SRG meetings be reviewed by all SRG members prior to publication.

The SRG discussed the effect of the upcoming eastern tropical Pacific (ETP) surveys on research priorities regarding Pacific Coast marine mammals. Large-scale surveys in the eastern North Pacific will not be able to resume until 2001; thus, a survey of Hawaiian waters and another California, Oregon, Washington survey will not be possible for several years. The group discussed other options to obtain information on the abundance of cetaceans in Hawaii and recommended several smaller-scale research projects be conducted until a large-scale survey of Hawaiian cetaceans can be undertaken.

The SRG decided to adopt Robert's Rules of Order in its decision-making process. It was agreed that the group would strive for consensus on each decision, consensus being defined as all participants can live with the decision even if they do not fully agree with it. If a dissenting opinion exists, it can be acknowledged briefly in the minutes, or at length in an appendix to the minutes. The dissenter(s) would need to decide whether to be identified with the written opinion. Consensus regarding

recommendations will be assumed unless otherwise noted. Appendices would need to be approved by concensus to ensure accurate reporting.

**REVIEW OF ORCAWALE SURVEY RESULTS**

Jay Barlow reviewed preliminary abundance estimates from the 1996 ORCAWALE survey. These results indicate that the abundance estimates of minke whales and *Mesoplodon* spp. have increased to the point where these stocks are no longer strategic. Final estimates will be available in about one year for all stocks.

The survey compared two different survey methods (passing mode and closing mode) because each is subject to different biases. NMFS is considering developing a hybrid system to reduce some of the potential biases. Other future analyses will include calibrating school-size estimates by observers from aerial photographic ground truthing, looking at alternate line-transect strata or truncation schemes, using a regression approach developed by Steve Buckland for group size analyses, looking at alternate geographic strata to better apportion Beaufort 0-2 survey effort, perception bias correction, dive correction factor for Baird's beaked whale, and school size adjustments for sperm whales.

Karin Forney is working on a statistical model of environmental conditions and variability in abundance. This paper will be a document presented at the next SRG meeting.

**REVIEW OF CA DRIFT-NET PINGER EXPERIMENT**

Barlow also reviewed the pinger experiment in the CA drift-net fishery. The pingers still appear to be quite promising. One sperm whale, however, was caught in a pingered net during 1996 and determined to be seriously injured. It is possible that sea state was a factor as the net was recovered in a Beaufort-6 sea state. No mortalities have have occured to date in pingered nets during 1997.

**SPERM WHALES**

Preliminary results of the Sperm Whale Abundance and Population Structure (SWAPS) Cruise were presented by Barb Taylor. The SWAPS survey was a paired independent acoustic and visual survey. The acoustic techniques substantially increased the number of sperm whales detected, especially those submerged that went unobserved by the visual survey. Of the 14 sperm whale detections made acoustically within visual range, 4 were not sighted visually (29%). (Jay Barlow indicated that this is

in agreement with the dive-time correction factor currently being used). However, the number of whales that go undetected by both the acoustic and visual surveys currently remains undetermined. The tagging activities currently being conducted on the Tagging and Tracking of Physeter II [TTOPII] cruise may provide more insight on this question.

The SWAPS tracklines covered an area in the mid-Pacific previously not surveyed as well as California and Oregon waters. A new abundance estimate based on these data will be available in the Spring. This estimate will be likely higher than current estimates of sperm whales in California waters because correction factors for group size and for the proportion of animals missed as calculated from the paired acoustic and visual data will be applied. However, sperm whales continue to be one of the rarest of the large whales during these large-scale surveys.

No hiatus in distribution was observed between California and the mid-Pacific during the SWAPS survey indicating that the stock structure question remains open. Genetic studies of population structure of eastern temperate North Pacific sperm whales are ongoing, but tissue samples from Alaska, California, Oregon and Washington are lacking; thus, some significant differences may exist that are currently unresolvable given small sample sizes.

Preliminary results of genetic studies from 75 sperm whale samples obtained from strandings, incidental take in gillnet fisheries, biopsy of live animals, and sloughed skin suggest that unique genetic sequences have evolved in the eastern and central North Pacific and that a statistically significant genetic subdivision exists between the animals sampled in the central temperate North Pacific during SWAPS and a Gulf of California cruise. At present, the statistical power to distinguish central temperate North Pacific samples from those collected in the eastern temperate North Pacific is lacking. The SWFSC expects to receive several sperm whale samples taken in the central Pacific near Hawaii from the Japanese. There is still a big need for samples from California, Oregon, and Washington. The upcoming ETP surveys could provide opportunities to biopsy sperm whales in more tropical waters that could help elucidate their population structure.

The SRG delayed a decision about changing the recovery factor for sperm whales until further results from the SWAPS cruise are available. Although the SRG thought that uncertainties regarding sperm whale abundance have narrowed somewhat (for example, the ORCAWALE survey filled in a gap in survey effort in Oregon and Washington waters), knowledge of stock structure and abundance remains uncertain and the group suggested that these research efforts remain a high priority. The preparation of a background document summarizing the current available information and past SRG discussions regarding sperm whales was recommended for the next SRG meeting in Spring when the recovery factor will be discussed again.

## HARBOR PORPOISES

Andy Dizon presented the preliminary results of the ongoing genetic analyses of harbor porpoise in the eastern North Pacific. Mitochondrial and microsatellite data from samples collected from the following nine strata were analyzed: Central California, Northern California, Oregon Coast, Washington coast, Spike Rock, the Straits, Inland British Columbia, Western British Columbia and Copper River Delta in Alaska. The microsatellite results are in general agreement with the mitochondrial data, but show greater resolution. The outer coast strata (Central California, Northern California, Oregon, and Washington) revealed no significant differences among them and, when pooled, these strata were significantly different from the remaining strata. Samples from Alaska were significantly different than all other groups in the microsatellite analysis. Spike Rock animals showed no significant difference from the Straits animals. The SRG recognized this result could occasion a significant management issue because if the stock boundaries are changed and the Spike Rock and Straits animals are identified as a single stock, human-related mortality may exceed the established PBR for the currently designated Inland Washington stock. It was noted, however, that more samples will help further resolve these relationships.

The SRG also discussed other information that could be used to better resolve the relationship of the Spike Rock to inland and outer coast animals. The SRG suggested satellite tagging of animals at Spike Rock, obtaining and/or sharing more samples for further analyses, and reviewing the current pollutants work being done on this species.

New abundance estimates will be available for Oregon and Washington waters by spring. The genetics analyses will continue with more samples being added (12 animals were killed in the fishery around Spike Rock that will be included and some samples from Canada may be obtained). A background document for harbor porpoise stocks on abundance, mortality, and stock structure is requested in time for the Fall 1998 meeting. The SRG will devote a significant amount of time to this question at that time, particularly on the question of stock structure.

## REVISED STOCK ASSESSMENT REPORTS

Scott Hill reviewed the revised SARs produced by NMML: killer whales, harbor seals (OR/WA), harbor seals (WA inland), N. fur seals, Steller sea lions, humpback whales, harbor porpoises (OR/WA), and harbor porpoises (WA inland). Jay Barlow reviewed two new SARs produced by the SWFSC: minke whales and *Mesoplodon* spp.

Killer Whales: Revision of the killer whale SARs was contingent upon a killer whale stock meeting, which has not occurred yet. It was suggested that John Heyning represent the Pacific SRG at such a meeting and report on any stock structure changes which may be applied in the next round of SARs.

Harbor Seals: No substantive comments.

Northern Fur Seal: No substantive comments.

Harbor Porpoises: The SRG was concerned what will occur when the mortality data currently being used (observer program data from 1991-1993) become outdated. Take rates could be assumed to remain constant and mortality could be adjusted with changes in fishing effort, but this fishery is going to undergo a major procedural change (large mesh on the top of the nets is going to be installed to reduce bird kills). It was agreed that a lack of observer data is problematic when human-related mortality is close to the PBR for a stock and it is clear there is some genetic substructure involved. Furthermore, Paul Wade's analysis suggests more mortality information is needed and the SRG agreed that further monitoring of harbor porpoise mortality in Washington inland waters is important.

Steller Sea Lion: No substantive comments.

Humpback Whales: No substantive comments.

*Mesoplodon* spp.: The stock was reclassified as non-strategic based on a new abundance estimate, which resulted in a higher PBR. Species-specific mortality information is improving, although species-specific abundance estimates remain unobtainable. No changes were suggested by the SRG.

Minke Whale: The stock was reclassified as non-strategic based on a new abundance estimate, which resulted in a higher PBR. However, estimated human-related mortality (3.6 animals per year) is still very close to the new PBR (4). No changes were suggested by the SRG.

The SRG preferred that all SARs be printed each year, even if several reports required no revision. The last revision date should be indicated on each stock's report. During the fall 1998 meeting, the SRG plans to review SARs for the following stocks:

1) Stocks whose status has changed since the last review (minke whales, *Mesoplodon* spp.)
2) Strategic stocks which have fishery mortalities above PBR (sperm whales, pilot whales) or stocks that are close to PBR (Baird's beaked whales).
3) Other strategic stocks for which new data on abundance or mortality are available.

4) Stocks shared with the Alaska SRG (humpback whales, grey whales, killer whales, eastern Steller sea lions).
5) Harbor porpoise stocks
6) Sea otters

**SEA OTTERS**

Carl Benz reported that in the recent annual surveys for California sea otters fewer animals were seen than were expected given the rate at which the population had been growing in the past. Some information, primarily anecdotal reports from fisherman, has indicated that otters may be taken in the relatively new finfish trap fishery. The fishery mainly targets sheepshead, for which there is a Chinese market, but also targets various rockfish and bottomfish. Little quantitative information exists on the level of participation or effort in this fishery, although it is known that effort has increased substantially of late. No logbook data are available and the number of traps set is not known. Traps in this fishery are not standardized and are often homemade. The SRG expressed concern regarding the recent decline in the numbers of California sea otters observed during assessment surveys conducted over the past few years and recommended increasing efforts to determine the cause or causes of this decline.

**CA SQUID PURSE-SEINE FISHERY**

Doyle Hanan provided background information on the California squid purse-seine fishery, which has expanded rapidly in recent years. The fishery has become the largest fishery in the state based on both landings and value. An estimated 150 purse-seiners currently participate in this fishery, approximately one-third of them coming from outside the state of California. Recent legislation in California requires a permit for purse-seine, dip or lampara net fishing for squid, but the number of permits to be issued has not been limited. These purse-seine fishing operations involve a vessel equipped with high-intensity lights attract the squid and a purse-seine vessel to capture them.

Concern has arisen regarding the effects of this expanding fishery on pinniped and cetacean populations. A number of squid researchers will occasionally be on board these vessels, but not as part of an official observer program. The SRG has recommended in the past that observers be placed on squid purse-seine vessels and recommended that the presence of the CA state biologists onboard these vessels could provide opportuniites to collect data on marine mammal interactions and conduct marine mammal research.

## TAKE REDUCTION TEAM ISSUES

The SRG is concerned that the six-month time period mandated by Congress for a fishery to reduce mortalities of all stocks below PBR is at odds with the philosophy of the PBR concept. The default values of the elements of the PBR equation are, by design, conservative, and, if we have set these defaults conservatively enough, better estimates will most likely increase the PBR. Thus, the PBR concept is designed to promote research to obtain better abundance estimates as well as to promote cooperation between management agencies and fisheries to monitor and reduce mortality. The field surveys, laboratory analyses, gear experiments, and evaluations of the success of mortality-reduction programs all take time - typically much longer than six months. It should be noted that the international tuna purse-seine fishery in the ETP reduced mortalities of dolphin stocks below PBR only after decades of biological and mortality-reduction research and millions of dollars.

In the case of the CA drift-net fishery, the PBR process has worked well and rapidly to promote research and industry efforts to reduce mortality. NMFS has conducted surveys to estimate abundances, studies to estimate correction factors to make these estimates more accurate, and, with the active cooperation of the fishermen, pinger experiments to reduce mortality. The fishermen have also instituted other gear modifications and measures to reduce mortality. As a result, five strategic stocks previously above PBR are now below it. These research efforts are ongoing and it is unrealistic to expect that such studies would be completed within the six-month deadline.

## PINNIPED RESEARCH

Mark Lowry reviewed pinniped research currently being conducted or being planned at the SWFSC. The SWFSC is conducting sea lion and elephant seal counts at haulout sites, food habits studies, cooperating with Mexican scientist to census rookeries in Mexico, and and is planning studies of genetics (currently unfunded). Of particular interest during the current El Niño event is the monitoring of food habits, when presumably K is temporarily lower, so as to develop an indicator for when the population reaches K. The SWFSC has also proposed to to conduct seasonal aerial surveys and food habits studies of pinnipeds in the vicinity of river mouths through which pass threatened and endangered salmonid species. Funding for CA state pinniped research programs have dried up, although the SW Region is attempting to find funding to continue them.

**PROPOSED TOPICS FOR NEXT SRG MEETING**

The next SRG meeting was suggested to take place in Hawaii during March-April 1998. The following topics were proposed:

- Sperm whale Recovery factor ( a lengthy review of this topic is anticipated)
- Hawaiian stocks, particularly reviews of ATOC aerial survey results, Hawaiian stranding programs, HI monk seals, enforcement issues, and state marine mammal programs
- Review of the MMPA and potential recommendations for 1998 reauthorization.
- Ship-strike mortalities
- Prioritize research recommendations

**REVISED PRIORITY RESEARCH AND MANAGEMENT RECOMMENDATIONS**

The following list of research recommendations has been updated. Several previous recommended actions that have been substantially achieved are no longer listed. The current list has not yet been prioritized.

The Pacific SRG has previously recommended conducting a comprehensive survey of the Hawaiian archipelago to fill the large gap in our knowledge about the abundance and status of Hawaiian cetacean stocks. Because Congress has mandated that intensive dolphin surveys be conducted in the eastern tropical Pacific during 1998-2000, neither NOAA ship time, funding for suitable charter vessels, nor SWFSC personnel will be available to conduct surveys in Hawaii. Instituting observer programs to estimate mortalities would also be problematic because of the small-scale nature of the local fisheries. The problem of dolphins that may be shot at to discourage them from stealing fish from fishing lines was thought to be a law enforcement and education issue rather than one requiring an observer program. The SRG recommends that smaller-scale research projects be initiated to assist in monitoring dolphin mortality and trends in abundance, such as:

1) Initiate a comprehensive stranding program to recover marine mammals from the Hawaiian Islands. This would allow trained personnel to examine carcasses for evidence of gunshots or fishery interactions, and to collect life history data.
2) Conduct photo-identification studies of bottlenose dolphins and other species that would be good indices of the effects of fishery interactions. Such studies could allow monitoring for evidence of non-lethal gunshots or fishery interactions, to monitor abundance using mark-resight methods to detect potential declining trends, and to take biopsy samples for genetic analysis. Photographs and biopsy samples could also be collected opportunistically during surveys conducted for other research purposes.
3) Conduct radio- or satellite-tracking studies of bottlenose, spinner, and spotted dolphins to determine home ranges and to infer population structure.
4) Update assessments of fisheries interactions with marine mammals. This could aided by coordination with the monk seal program to obtain observer mortality data from domestic and foreign fisheries operating near Hawaii.

The Pacific SRG recommends that monitoring of the Pacific coast harbor porpoise stocks be continued. Although the reduction in effort by the CA coastal set-net fishery has apparently reduced mortality, recent data by the NMFS suggest that the population still may be declining. The status of harbor porpoise stocks in Washington and Oregon also remain unclear. Monitoring of these stocks should continue, along with studies to determine whether the declines are due to environmental or human-caused factors, and to document the population growth rate in the wake of fishery mortalities and population decline. Satellite tracking of WA harbor porpoises could help determine stock structure.

It is unknown whether the virtual disappearance of pilot whales from the California coast is a natural phenomena due perhaps to changing environmental conditions or due to fishery interactions (possibly by the squid purse-seine fishery). Because the California Dept. of Fish and Game is instituting a new research program on market squid, it would be useful for researchers aboard squid purse seiners to document any incidental or directed mortality that may be occurring. Research into the current distribution and migration patterns may shed light on these questions. Satellite-tracking of pilot whales that are captured and released from purse-seine nets could be attempted on an opportunistic basis.

The SRG recommends that NMFS continue to support research on life history, vital parameters and condition indices, and develop population correction factors for California sea lions and Pacific harbor seals. These populations will not continue to increase indefinitely and when abundances stabilize and possibly decline, this base of information will be invaluable. Such "historical" data sets would be very useful for assessing and reacting to present declines in the Steller sea lion and harbor seal populations in Alaska, but very few such data sets exist.

The SRG is concerned about the recent decline in the CA sea otter population. The SRG recommends that efforts be increased to determine causes of mortality, such as 1) expanding the efforts of the stranding program to recover carcasses that could indicate the causes of death, and 2) initiating a shore-based observer program to monitor new and expanding coastal fisheries (for example, the finfish trap fishery) to determine whether any sea otter mortality is occurring and contributing to the population's decline.

The SRG recommends that efforts to coordinate on an international level to address concerns for transboundary stock issues (*e.g.*, Mexico and California sea lions; Canada and Washington harbor porpoise) continue and be increased.

The Pacific SRG supports the recommendation of the Hawaiian monk seal Recovery Team to increase observer coverage of longline fisheries (currently at 4-5%) to a statistically significant level.

Following the October 1997 meeting described in these minutes, the Pacific SRG included the following statement in its formal list of recommendation to NMFS:

"Regarding the NMFS Draft Report to Congress on Recommendations for Addressing the Impacts of California Sea Lions and Pacific Harbor Sealson Salmonids and West Coast Ecosystems, the SRG supports the NMFS proposals for: 1) implementation of site-specific management of California sea lions and Pacific harbor

seals as outlined in the report; 2) increased efforts to develop safe and effective non-lethal deterrents, and; 3) funding and conducting research to address the information needs identified in the report."

The Pacific SRG was first briefed on the NMFS Draft Report at its May 1997 meeting in Seattle. Since not all members were in attendance during that discussion, the SRG reviewed this issue again at the October 1997 meeting.

The SRG concurs that there can be situations were predation by locally abundant pinnipeds can have negative affects on certain fish stocks and on sport or commercial fishing activities in some cases. The general conditions under which such affects can occur include situations where fish stocks have been reduced in abundance (as a result of habitat degradation, water diversion, over-fishing, etc.), where habitats have been altered, where fish are concentrated and passage is restricted (by natural and artificial barriers).

The SRG recognized the current healthy status of Pacific harbor seals and California sea lions as a result of the success of the MMPA in providing 25 years of protection to these populations. The SRG agrees with the NMFS Draft Report in that natural predation by pinnipeds is not implicated as a cause of the more recently observed declines in many salmonid stocks on the Pacific Coast. The available information suggests that many pinniped-fishery conflicts are the result of learned behaviors by a relatively small number of individual animals. In this respect, the proposal for site-specific management of small numbers of pinnipeds from healthy populations to protect other important marine resources, such as threatened, endangered or otherwise state-designated fish stocks is a biologically sound and risk-averse approach to the conservation and management of these resources.

With respect to the recommendation provided in the NMFS Draft Report regarding deterrents, the Pacific SRG strongly endorses the need to develop highly effective, long-term, non-lethal deterrents to pinnipeds (and other species in some cases) that may damage property, destroy fishing gear or catch, or themselves may be killed or seriously injured during fishing operations.

The NMFS Draft Report proposes to selectively reinstate authority for the intentional lethal taking of California sea lions and Pacific harbor seals by commercial fishermen to protect gear and catch. Pacific SRG members were divided on this recommendation. While some members thought that this authority as outlined should be granted, other members questioned the presumption that this deterrent was truly effective, and still others were opposed to the proposal. The Pacific SRG concluded that since this question was primarily one of policy rather than of science, a specific recommendation on this point would not be provided.

The Pacific SRG agreed with the information needs identified in the NMFS Draft Report. This NMFS list is more complete and expands upon a previously-made SRG recommendation to conduct region-wide research on the interactions of increasing pinniped populations with other important marine resources.

**Appendix 1**

**Scientific Review Group - Pacific Region**

Hannah Bernard
Hawaii Wildlife Fund
Robin Brown
Oregon Department of Fish and Wildlife, Marine Region
Mark Fraker
Terramar Environmental Research
Doyle Hanan
California Department of Fish and Game, Marine Resources Division
John Heyning
Associate Curator of Mammals, Section of Mammals, Natural History Museum of Los Angeles County
Chuck Janisse
Federated Independent Seafood Harvesters
Steve Jeffries
Washington Department of Fish and Wildlife, Marine Mammal Investigations
Katherine Ralls
Department of Zoological Research, National Zoological Park, Smithsonian Institution
Michael Scott
Inter-American Tropical Tuna Commission
Terry Wright
Manager of Enhancement Services, Northwest Indian Fisheries Commission

**Invited Participants and Observers:**

Jay Barlow
Grant Cameron
Andy Dizon
Meghan Donahue
Mark Lowry
Barb Taylor
NMFS Southwest Fisheries Science Center
Carl Benz
US Fish and Wildlife Service
Scott Hill

National Marine Mammal Laboratory

Irma Lagomarsino

NMFS SW Regional Office

Joe Scordino

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**Appendix 2**

**WORKING PAPERS FOR SCIENTIFIC REVIEW GROUP MEETING**
**LA JOLLA, CALIFORNIA**
**OCTOBER 15-17, 1997**

| PAPER NUMBER | TITLE |
|---|---|
| **SRG-1** | National Marine Mammal Laboratory Stock Assessment Reports for the Pacific Region (Hill) |
| **SRG-2** | National Marine Mammal Laboratory Stock Assessment Reports for the Alaska Region (Hill) |
| **SRG-3** | Cetacean Mortality in California Gill Net Fisheries: Preliminary Estimates for 1996 ( Julian, SC/49/SM) |
| **SRG-4** | Results of 1993 Aerial Surveys in Hawaiian Waters (1993 ATOC Marine Mammal Research Program: Annual Report to Advance Research Projects Agency, Mobley) |
| **SRG-5** | Table 2. Estimated abundance for California cetaceans based on 1991/93 and 1996 ship surveys (Barlow) |
| **SRG-6** | Table - Drift Gillnet Mortality Data (Julian and Beeson, in press; Julian 1997) |
| **SRG-7** | Meeting of the Pacific Scientific Review Group, National Marine Mammal Lab, Seattle, WA - 6-8 May 1997 (SRG) |
| **SRG-8** | Revised Priority Research and Management Recommendations (SRG) |
| **SRG-9** | Preliminary Estimates of Cetacean Abundance off California, Oregon, and Washington Based on a 1996 Ship Survey and Comparisons of Passing and Closing Modes (Barlow, Second Draft - October 3, 1997) |
| **SRG-10** | Southwest Fisheries Science Center Stock Assessment Reports for the Pacific Region (Barlow) |

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| **SRG-11** | Population Structure of Sperm Whales in the Eastern Temperate North Pacific: Preliminary Findings (Mesnick) |
| **SRG-12** | Some suggestions for providing a better written record of the recommendations of the regional Scientific Review Groups (Wade) |
| **SRG-13** | Observer record for seriously injured sperm whale, December 1996 |
| **SRG-14** | Killer whale re-sights Table (N. Black, *et al*., In press) |
| **SRG-15** | Sperm whale cruise results (Taylor) |
| **SRG-16** | Effects of averaging multiple abundance surveys on PBR's (Wade) |
| **SRG-17** | Harbor porpoise genetics (Dizon/Chivers) |
| **SRG-18** | Market Squid, a status review (Hanan) |
| **SRG-19** | Revised Sea Otter Stock Assessment Reports (Benz) |

**Appendix 3**

**Agenda for the Sixth Pacific Scientific Review Group Meeting**
**Southwest Fisheries Science Center, La Jolla, CA**
**15-17 October 1997**

**Wednesday, 15 October**

- Review/approve agenda
- Minutes from May 1997 meeting
- Review research recommendations from May meeting
- Update research and general recommendations
- Communications among SRGs and with NMFS
  - Joint meeting with Alaska
  - Comments from Atlantic SRG
- Cetacean abundance estimates: 1996 CA/OR/WA ship surveys
- Mortality estimates
- Status of proposed HI cetacean surveys
- Status of ATOC aerial survey results
- Sperm whales
  - 1997 survey results
  - Preliminary analysis of new genetic data
  - Revisit adjustment of Recovery Factor
- Harbor porpoise
  - Update on genetic analyses
  - Discussion of stock structure

**Thursday, 16 October**

- Process for SRG decision making; development of recommendations
  - Revisit recommendations from May 1997 meeting
  - How to deal with previous recommendations?
- SAR/PBR issues
  - New process/schedule for revision and review
  - Revised SARs available for review/discussion
  - Selected Pacific stocks
  - AK SRG "joint interest" stocks
  - Updated summary table of Pacific stock PBR calculations
  - Lumping vs. splitting of multiple abundance surveys
- Killer whale abundance and stock structure questions
- Results of CA drift net pinger experiments
- TRT discussions
- Status of Pacific TRT process
- Use of research results, review of deadlines, NMFS actions
- USFWS issues
  - Contacts/discussions with NMFS on fishery categorization
  - 1997 sea otter survey results
  - Sea otter mortality in lobster/finfish traps (Janisse)
- Review of California squid fishery
  - History, status, future trends
  - Interactions with pilot whales, CA sea lions, other mammals

**Friday, 16 October**

- Review of NMFS pinniped research activities
- International cooperation on transboundary stocks
  - Define issue and need
  - SRG recommendations for actions by NMFS
- The 1994 MMPA amendments and the SRG process
- 1998 MMPA reauthorization: What is the SRG's role?
- Review and finalize research recommendation list
- Next SRG meeting: topics, dates and location
- Adjourn