Minutes for the Pacific Scientific Review Group Meeting
La Jolla, California, 17-19 November 2003

The fourteenth meeting of the Pacific Scientific Review Group (SRG) was held at the La Jolla, CA from 17 to 19 November 2003. All Pacific SRG members were in attendance with the exception of Robin Brown and Chuck Janisse. Jessica Redfern served as rapporteur. Michael Scott served as chairman of the SRG. The SRG members and other participants are listed in Appendix 1, review documents are listed in Appendix 2, and the agenda of the meeting is in Appendix 3.

NMFS Reorganization

Jay Barlow reported that Hawaii is no longer part of the Southwest Region, it has become a separate Region. Dr. Tillman is retiring soon, and Bill Fox, from the Science and Technology Division at headquarters, is his replacement.

Definition of ZMRG

Emily Menashes reviewed the current status of ZMRG. The advanced notice of proposed rule received 12 comment letters. The proposed rule should be out in mid-December, with another 30-day comment period. At this time, NMFS is leaning toward option 3. the option used in the ETP international fishery (ZMRG=0.10 % of Nmin). The NMFS rationale for preferring this one at this time is that it separates the meanings of negligible and non-significant impact, and it gives the most flexibility, *e.g.*, it can take other population characteristics into account. Michael Scott pointed out that the advantage of Option 3 was its simplicity, with only Nmin required.

Congressman Young is proposing an amendment to do away with ZMRG so that management would be based on sustainable *vs*. unsustainable criterion rather than significant *vs*. non-significant one. Some Congressman are convinced ZMRG will close down fisheries. Hence, Option 3 is being considered because it allows inclusion of other data sources and types. Emily Menashes pointed out that nothing is decided yet, and there will be opportunity to comment when the proposed rule is published. The SRG thought a longer comment period would be important if the proposed rule comes out in mid-December, Emily agreed to see if a 60-day comment period is possible.

The Pacific SRG will consider whether they need to meet depending on what the rule says. Michael Scott noted that the SRG's comments on the advanced notice of proposed rulemaking still would stand. Emily pointed out that more detailed comments would be helpful, *e.g.*, justifications of reasons for preferring one option.

MMPA Reauthorization

Emily Menashes gave an overview. The current administration bill revises the definition of harassment, and expands the scope of Section 118 to include management of recreational fisheries. This is especially relevant on the east coast and in Hawaii, where some non-commercial fisheries use the same gear as commercial ones and can impact marine mammals. The bill also includes bans on the release of captive marine mammals and traveling cetacean

exhibits, a requirement to investigate removal of nuisance pinnipeds, and an extension of deadlines for take reduction teams. A vote is expected in early 2004.

***National Defense Appropriations Act*:** The recent defense appropriations bill included provisions to exempt the military from the MMPA, NEPA, and ESA. This was motivated primarily because of concern over restrictions on Navy and military readiness, but the bill includes all military groups. Tara Cox pointed out that it raises interpretation issues about research funded by and for the government, and it may impact the permit process because of differences in the definition of harassment. Emily pointed out that it is harder to work out interpretation because the regulations were added to the appropriations bill, rather than through the standard re-authorization processes.

GAMMS 2 Workshop

Karin Forney presented an overview of the Guidelines for Assessing Marine Mammal Stocks II workshop, held in Seattle in September 2003. There was broad agreement that the guidelines generally worked well, but some issues have arisen that are not adequately addressed. These included assigning mortality in a fishery that takes animals from multiple stocks, clarification that demographic isolation includes stocks such as N. Atlantic humpback whales which exhibit feeding-ground site fidelity even though they mix in the mating grounds, and the proposal to include explicit 'prospective stocks' when new information about population structure becomes available. The SARs would include all calculations (Nmin, PBR) and determine status for each prospective stock, allowing advanced evaluation and comments on proposed changes. The group also agreed to change the wording within the document to use the term 'stock identification' rather than 'stock definition' to avoid the perception (*e.g.*. by members of Congress), that NMFS was arbitrarily re-defining stocks. Some stock-specific issues were discussed for monk seals, where the PBR calculation should not apply because the population is declining. In such cases, should the PBR be zero or undefined. For North Atlantic right whales, the PBR is set to zero because no takes are allowed under the ESA.

The PSRG discussed whether PBR should be undefined or zero. Michael Scott thought it should be undefined, because PBR is an equation defined by law and if none of terms are zero, then PBR shouldn't be zero. Steve Jeffries noted that Southern resident killer whales stocks are small and hence have PBR = 0.8, which would allow one mortality every five years. Should PBR be zero so that it is clear that no mortality is allowed?

Another stock-specific issue raised at the GAMMS workshop was the handling of translocated populations, (*e.g.*, sea otters in WA), when there are fishery impacts. Are they considered a separate stock even though they are not genetically distinct from the source population in Alaska? SRG members commented that demographic isolation is the key issue. A secondary question was whether they are automatically depleted because they are below OSP, or whether there should be a test period to determine whether the translocated population will persist before it is called a stock? Michael Scott pointed out that PBR should be determined based on the number of individuals in the translocated population. This issue seems to apply to sea otters and monk seals, whereby it is important to separate situations where a new population is established (WA sea otters), *vs*. moving problem individuals (monk seals). Mark Fraker inquired whether there is there a precedent in the ESA for establishing populations. It was noted that there is in

the ESA but not in the MMPA. This raised discussion over sea otters. Fish and Wildlife can not do stock assessments because they do not have the time or the staff, and they feel the SARs are less relevant than their ESA responsibilities.

Another topic discussed at the GAMMS 2 workshop was the SAR publication schedule, and whether the process of revising and printing the entire SAR every year is necessary. The review process often takes so long that the documents cannot be published in a timely manner. Proposed streamlining that will still meet Act requirements included revising strategic stocks annually, and conducting only an informal review of other stocks every year. Full revisions would be done every three years unless new information that impacts stock status becomes available. Terry Wright mentioned that only a few things are required by the MMPA, while there is a lot of extraneous historical information in the SARs. Jason Baker noted that during public review there are requests to include more information. Possible options might involve 1) referencing this information so the public can find details elsewhere, 2) include the information only in a 'base SAR,' but not thereafter, or 3) putting the information in an appendix.

On the issue of changing recovery factors for endangered species, the Alaska group has adopted a new schedule for recovery factors, while the PSRG will adopt the system developed by Barbara Taylor.

A final discussion point at the GAMMS 2 workshop focused on the issue of stock definition. In light of recent and upcoming stock splits, there is a perception in Congress that the splitting of stocks may have gone too far. Paul Wade reviewed information on the AT1 killer whale stock and concluded that it meets the requirements of a stock as defined previously, even though it constitutes so few animals. The use of management units instead of stocks was raised to try to get around the perception of 'out-of-control' stock splitting by NMFS, but management units were rejected by the workshop. A detailed report of the GAMMS II workshop will be mailed by Robyn Angliss upon completion.

2003 List of Fisheries

Emily Menashes reviewed the 2003 List of Fisheries, which was finalized in July. The CA/OR drift gillnet fishery changed from a Category I fishery to a II. With the reduction in Nmin in the sperm whale SAR, the fishery is now above 50% PBR and NMFS will continue to implement measures from the Take Reduction Team. Dockside enforcement will be added for boats not observed. In Alaska, the Aleutian groundfish trawl was not re-categorized because it can better be described by separating out components of the fishery. After splitting these components, categorization will be reevaluated. The decision should be in the 2004 LOF, which should be out in the early winter.

Terry Wright inquired about the Hawaii longline fishery, and Emily explained that it will be reviewed for the 2004 LOF, which uses information from the 2003 SAR. Resolution of the Hawaii longline issue will use information from the cetacean surveys conducted during 2002 and the 2004 SARs. Hence the status of the Hawaii longline fishery may not be decided until 2005. The SRG noted that the CA longline fishery has a higher category, without documented takes and that the CA, Hawaii, and Atlantic longline fisheries should all have the same category.

There are difficulties when permits and landings are in one area, but the boats actually fish in other areas (*e.g.*, the Hawaii-based and CA-base longline fisheries). The longline fishery will be treated as a single 'west coast longline' (not 'CA-based longline'). This is same as the drift gillnet fishery. Combining all Pacific longline fisheries would be difficult, however, because there are two different fishery management councils. The intent of the HI closures was to prohibit swordfish targeting north of the equator, but this loophole allowed boats to move to CA and keep targeting swordfish. The West coast-based fishery should eventually get same regulations as Hawaii, for both tuna and swordfish. Emily noted that there probably would be separate TRTs for the fishery in the different regions.

Marine Mammal Commission Cooperation with SRGs

Tara Cox expressed the desire of the Marine Mammal Commission to improve coordination with the SRG's, and be more involved in LOF issues. MMC will inform the SRG on its letters of recommendation, and would like to receive copies of the SRG recommendations.

Sea Otters

Lillian Carswell presented the spring count (2205) which was up 17%. This is probably because 2002 was anomalously low and 2003 had good weather conditions for the aerial survey counts in Monterey Bay. Overall, there has been a 1% increase per year since 1998. The San Nicholas Island (SNI) population is estimated as the highest value obtained in the quarterly count, which was 33 independents and pups in March 2003. There is no information on some aspects of fishery interactions. Gillnet mortality is assumed to be is zero because of closures in range of sea otters. There is limited information on crab and lobster traps, with a few documented trap mortalities for Southern sea otters. USGS is observing finfish traps opportunistically – they have observed 1624 traps with no mortalities. A 5-inch ring restriction on traps was implemented in January 2002. The effectiveness for wild otters is known, but tests on Monterey aquarium otters were effective.

An unusual mortality event for southern sea otters was declared in May, 2003. Key agencies involved are the CA Dept Fish and Game (CDFG), Monterey Bay Aquarium, USGS, with the CDFG in Santa Cruz taking the lead on necropsies. No clear patterns have emerged, with mortalities occurring everywhere, high mortality in prime aged (mature) individuals, and the proportion of causes of death (including boat strikes, disease, sharks, starvation) appears to be the unchanged, although numbers in each category are up.

The SNI Translocation program is being re-evaluated, and a public draft of the evaluation and proposed future plan is coming out. Alternatives considered in the proposal are 1) resuming program implementation as designed, 2) modifying the management zone (MZ), and 3) declaring failure and erasing the MZ. The latter alternative would leave 3 options for translocated otters: removing all otters from SNI and the MZ, removing otters from SNI, but not the MZ, or leaving otters at SNI and in MZ. Letters of recommendation can be submitted during the comment period and the EIS will come out in the early part of the year. Otters will not be moved until the program is evaluated. Kathy Ralls commented that FWS should get rid of the MZ and leave otters there. Lillian Carswell also noted that research is continuing at SNI, by USGS, UCSC, and Monterey Bay Aquarium. They have captured and tagged 16 of the 30 otters.

***Southern Sea Otter SAR*:** The SRG notes 1) that the present practice of portraying abundance as a 3-year running mean dampens apparent fluctuations in abundance, 2) that the use of uncorrected aerial strip transect counts results in an underestimate of actual numbers, and 3) that the need to schedule a survey aircraft often results in surveys being conducted under suboptimal conditions.

The dampening of 3-year running means conceals possibly significant population changes and can lead to the unusual situation where Nmin is higher than the graphed population level in some years. The aerial survey approach of using direct strip transect counts, without correcting for diving behavior and other factors, contributes to an underestimate. The use of government-owned aircraft requires advanced scheduling and therefore, weather conditions cannot be taken into account when the surveys are to be flown. Using charter aircraft may permit greater flexibility in survey timing.

Karin Forney inquired why the southern sea otter censuses are not treated as surveys. Looking at sea state factors or proportion in deeper water could allow for better estimates, and dive time corrections could be used. Morning versus afternoon flights (which are now done) can serve as replication. Steve Jeffries pointed out that the WA surveys are not in open water, and they don't fly unless conditions are good. Funding is a problem just to cover existing surveys. John Heyning pointed out that the Figure and Table do not show evidence that survey bias is a huge problem, but unrealistic increases/decreases such as the 17% 2002-2003 difference could be caused by sampling error.

***Washington Sea Otter SAR*:** Lillian Carswell presented the latest survey results (PSRG 19). During July 2003, an aerial survey was supplemented by ground counts; 672 otters were seen, an increase of 22% from 2002, and an 8.2% increase since 1989. A draft SAR has been written and is in the review loop now.

***General sea otter issues*:** Much of otter work is lawsuit driven, which makes getting to SRG meetings difficult. It is easier for FWS staff working on sea otters to get to San Diego, compared to other locations (*e.g*., Hawaii), because the agency is underfunded. Regarding SAR publication schedule, the goal is to get the draft SAR to headquarters by March and include it in the 2004 SARs. They hope to publish availability notice for SARs for southern and WA otters in federal register.

Hawaiian Monk Seals

Jason Baker presented 2003 data that are not yet in the SAR. The French Frigate Shoals population is declining; the age structure indicates that the decline will continue because of loss of pups to shark predation. Lisianski and Laysan are stable, with Laysan having a record survival this year of >80%. Populations on the three western-most islands (Midway, Kure, Pearl and Hermes, which are closely linked demographically) are no longer growing, and the few cohorts have had decreased survival during the 1st and 2nd years. At the Main Hawaiian Islands, there are no new survey data since 2002. Ten pups have been born on the main islands. Pups on main islands are much bigger than on the NW islands. A population trend analysis in the draft 2004 SARs shows a decline of ~4% before 1993 and ~2.4% thereafter. The population has been declining for decades but there are no local fishery impacts.

NMFS may split NW islands and main islands into two stocks because they seem to have different population trajectories; the main island populations are growing, while the NW populations are decreasing. These two areas are not exchanging individuals. Previously monk seals were rare in main islands, but they showed up around Nihoa around the 70's. In 1994, 20 males were translocated, but monk seals are also naturally starting to re-colonize the main islands. PBR for the main Hawaiian Islands would be a fraction of an individual. No future aerial survey is planned as it's not a good method for getting at population size.

The SRG discussed the need for coordinators on main islands to identify animals and monitor population dynamics as well as to conduct public outreach regarding interactions with people. Island coordinators would serve as liaisons for the Pacific Islands Regional Office for all monk seal issues on each of the Islands. They would deal with the public potential human-seal conflicts and prevent habituation, collect reports of hauled out seals, respond in the event of an injured or stranded seal. Additional duties may also include the census of nearshore/habitat use observation/reporting of nearshore cetaceans.

Fishing debris removal is still a large program; 120 tons were removed this year. A gillnet task force urged to make rules consistent with turtle protection, but the effort died. Two seals were caught in gillnets, but survived. The state has applied to NMFS for incidental take permit that includes monk seals. Changes in regulations have been made in the attempt to get the section 10 permit. The consensus among fisherman is that the nets are bad and they are trying to get a ban. There will be a push for regional or statewide bans, but this will take time.

Hawaiian Monk Seals SAR: The PBR is undefined and the group discussed the implications of having no PBR, and the need for a uniform policy. GAMMS 2 looked at defining this policy, but the MMPA is contradictory. PBR is defined both as an equation, and as an amount that can be removed while allowing population to grow. Options include setting as unknown/undefined, or calculating using the formula but then saying that it does not apply when the species is endangered.

Longline Fisheries

***West Coast-based longline fishery*:** Don Petersen gave an overview of the California longline fishery, which spatially overlaps with the former Hawaii-based fishery. In the Atlantic, tuna were fished out, then the fleet moved to the Gulf of Mexico until it was fished out. In the late 1980's and 1990s, some of this fleet moved to Hawaii. The fishery targeted swordfish (shallow set ~100ft, night soak, squid bait) or tuna (deep set, day soak, fish bait). Most mammal and turtle interactions were in the swordfish gear. An observer program was initiated in Hawaii in 1994 because of turtle mortalities, and ultimately the area north of the equator was closed to swordfish-style fishing because the turtle bycatch was too high. About 25 boats that wanted to target swordfish dropped the Hawaii permit and relocated to California, where initially there was no observer program. The CA swordfish techniques are the same as they were in Hawaii, and they have continued to use blue-dyed bait to reduce seabird interactions and loss of bait. The fleet lands mostly swordfish and very few other fish species, moving west throughout season (Aug-May). They have to work outside 200 miles (CA state rule). Majority of fleet (19-20 vessels) are Vietnamese from Hawaii, 4-5 other vessels are from CA that longline or longline/

driftnet. Targeting and processing in CA is the same as in Hawaii, where there now is no swordfish fishery. So the fisheries are separate.

A California observer program was initiated in 2001. During the 2001-2003, 12% of the fleet was observed. High turtle bycatch was documented with all released alive. There could, however, be delayed mortality post-release, and some tagging experiments are underway. Loggerhead turtles generally get hooked taking the bait and they are brought on board. Leatherbacks usually get entangled in line or hooked and are too big to bring on board, so they usually just are cut loose. Seabirds (Black-footed and Laysan Albatross) usually die. During the two observed years, the CA longline fleet caught one Risso's dolphin, which was released after cutting the line. There are 6 trips currently going on, and recent 2003 takes include 6 more loggerheads, 1 unidentified dolphin (dead), and some blackfooted albatross. Last year, there were funding gaps in Dec & Jan, so the target 20% coverage was not achieved. This year things are on track for meeting the 20% target.

Pete Dupuy pointed out that he views the CA fishery as new and different from Hawaii, and includes the boats that originally were from Gulf of Mexico. There has always been a partial fishery in CA, depending on fish movements. Now the fleet stays in CA, although they will likely get permits again if Hawaii re-opens to swordfish fishing. The fleet wants to learn from past mistakes, and needs to share information among boats. His boat now is using dyed bait, which has cut bird bycatch by 90%. Similarly, there are methods that will allow turtles to survive better, such as carrying fewer hooks, longer lines, ball drops, and having ARC dehooker devices on all boats. Pete Dupuy gave further details on fishing operations: vessels tend to be 80-90ft, have 30-40 mile lines with 800-1000 hooks and ball drops to 10-12 fathoms, and the average soak time is about 12 hours. He also expressed concern that by restricting CA longline fisheries, the effort will be shifted to other countries without regulations, causing greater harm to turtles and marine mammals. Fishermen are making the changes on their own to help reduce the negative effects.

Some discussion ensued regarding techniques for mitigating impacts to protected species and dissemination of information. Don pointed out that there were two voluntary skipper workshops in Long Beach at the beginning of the last two seasons. At these workshops they announced the mandatory observers, and techniques for handling turtle and mammals. Workshop attendance may become mandatory through Fishery Management Program. John Heyning pointed out workshops and the collaborative model of the TRT have been successful for the driftnet fishery at working together to try to improve gear. Kathy Ralls agreed that it should be easier for fisherman to get information, perhaps by mailing out a booklet or via a website. Lewis Van Fossen said that workshops on protected species are mandatory in Hawaii. Don Petersen also noted that the volunteer observer program was not really working.

***Highly Migratory Species Fishery Management Plan and EIS*:** Emily Menashes provided an update of the HMS FMP and EIS situation. The FMP was delivered to NMFS in September, and it incorporates both recreational and commercial fisheries. For the drift gillnet fishery, the FMP adopted the State regulations. For the pelagic longline fishery, the FMP maintains the ban on fishing within 200 miles. West of 150 degrees W, the FMP adopts the Hawaii measures prohibiting swordfish-style fishing, which would force CA fishermen to move south or stop

targeting swordfish. The areas east of 150W were not included, so there is concern that the biological opinion process could result in a jeopardy finding. This would result in a proposed rule under ESA to apply the measures east of 150W.

Experimental fisheries exploring swordfish targeting techniques will require authorizing some amount of take. There are ongoing experiments in the Atlantic, and authorizing experimental fisheries in the Pacific is a problem because Pacific sea turtle populations are in worse condition than in the Atlantic. Swordfish-fishing is more profitable and switching to tuna is less viable for the affected fishermen.

Pete Dupuy pointed out that it will put Vietnamese fisherman out of business, and it will hurt him as well. The decisions should rely on science, but it seems that many decisions are political. The real issue is whether the fishery is jeopardizing the turtles. Observer program seems to say no. Yet NMFS is continuing to restrict fishery, even though council turned down NMFS suggestions. Peterson added that although there is a west coast movement to prohibit swordfish targeting because of turtles, there is also a movement to re-open a limited and experimental swordfish fishery in Hawaii.

Emily Menashes said that legislation is intended to set up take reduction teams for turtles and birds, similar to those for marine mammals, but with different time frames for recovery measures. Peterson suggested comparing the effectiveness of measures using the data recorded by observers on the bird bycatch reduction techniques that are used. Hannah agreed that NMFS needs to have a multi-species bycatch team, and reminded participants of a past SRG recommendation to that effect. John Heyning said that the TRT has the opportunity to be a collaborative environment, whereas other methods end up adversarial.

Don Peterson said that east coast experiments for vessels targeting swordfish found that oversized circle hooks with particular baits worked to preserve turtles (couldn't swallow large hooks). Leatherbacks, however, still become entangled. John Hall added that circle hooks tend not to be deeply ingested, but rather hook primarily in the gape of the mouth.

***Hawaii Longline Fishery*:** Lewis Van Fossen provided an overview of the 1994-2000 HI longline fishery. Longlining has occurred in Hawaii since the 50's. In 1987 there were about ~37 vessels, and the fishery subsequently expanded to about ~1140 trips per year (fairly constant). Since 1994, there has been a requirements for both logbooks and an observer program, with coverage initially averaging around 4.5%. NMFS was sued in 1999 by the Center for Marine Conservation, and they won an injunction against the longline fleet. A compromise was reached that restricted swordfish fishing and increased observer coverage (20% required by Nov. 2000, which was obtained). The effect of this has been to eliminate the Hawaii-based swordfish component, and a number of vessels moved to California. There is still some limited fishing in the northern (former swordfish) fishing ground, targeting primarily bigeye tuna. The swordfish and tuna components of the fishery interact with different marine mammals: swordfish takes mostly Risso's dolphin, tuna trips have taken mainly false killer whales and one beaked whale. The tuna sets involved more hooks (1500-2400 per set, 30-35 mile long lines). The PIRO observer program is now working with SWFSC to collect biopsy samples from incidentally caught mammals, but none have yet been collected.

The Hawaii Longline Association sued NMFS to throw out most recent Section 7 Biological Opinion and sea turtle regulations on procedural grounds. They judge vacated the biological opinion and the 2002 sea turtle conservation regulations. This left the fishery without an incidental take statement under the ESA, meaning all turtle takes were illegal. A compromise allowed the regulations and 2002 biological opinion to be temporarily reinstated, and NMFS will re-issue a Biological Opinion. The FMP would also be amended, with possible outcomes including a continuation of the swordfish prohibition, or allowing some limited swordfish catches. It is expected that an experiment on circle hooks would be conducted before a limited swordfish fishery is re-opened. Lewis noted that some marine mammals were taken on the circle hooks in the Atlantic (experiment on swordfish).

The SRG discussed whether to recommend an experiment with circle hooks. This decision was put off until similar experiments from the Atlantic could be analyzed, however, the Pacific appears to be going this way regardless. A post-hooking tagging and survival study for loggerhead turtles is also currently being conducted.

John Hall provided some insights from his experiences with circle hooks. In bottom longline fisheries, there was a 200% increase in catch efficiency of halibut with circle hooks versus J-hooks. He is now using circle hooks to catch tuna, and doing just as well as with J-hooks. Mean number of hooks used per night is about 2500, set at dawn and hauled in after dark. The sets are deep and take 12 hours to haul in. In contrast, swordfish-style fishing involved setting at dusk, soaking overnight, and hauling in the morning. The tunas require smaller hooks than for swordfish. John Hall believes bycatch rates are the same for circle and J-hooks. He has had interactions with false killer whales and pilot whales. These species take fish off the hook, presumably during haul-back, but he cannot observe details because it is dark. About one out of four trips are affected. He also explained that some vessels have converted to setting off of the side of the boats to reduce sea bird interactions (by the time the lines hit the back of the boat, where the birds are comfortable coming to the boat, the bait is too deep for the birds to get). This has apparently reduced seabird interactions by 90%. NMFS did some experimental sets and did observe a marine mammal interaction.

Hawaii Set Gillnet Fishery

The SRG has previously recommended that this fishery be monitored. Hannah Bernard noted that a state ban on this fishery is under consideration. Jason Baker noted that Margaret Akamine has information on a monk seal that was caught (alive) in the fishery. The SRG reiterated its recommendation that the fishery be monitored, and will review the status of this fishery at its next meeting and consider recommending a change in classification, given the evidence of marine mammal takes. NMFS participants noted that fisheries can be re-categorized based on analogy and anecdotal evidence, and Hawaii SARs have evidence of mortality from this fishery.

Other Hawaii Fisheries

Lewis Van Fossen also gave an overview of other Hawaiian fisheries. As of October, 2003, they have started observing the Northwest Hawaiian Islands bottomfish fishery, primarily to look at monk seal interactions. There are 9 boats, between 35 - 55 feet long, and trips are 10 days in the near-island zone, 28 days in outside areas. The current coverage goal is 20% . There may be a

National Marine Sanctuary set up in this area, but it is not clear what effect it will have on the fisheries because fishing can still be allowed in sanctuaries. The observer program was designed to look at monk seal interactions. Since the nearshore ban on fishing, no monk seal interactions have been observed.

PIRO is also developing an America Samoa Program, and they want to get observers on vessels as soon as possible, but currently have no authorization and are waiting until regulations are finalized. These fisheries will be included in the List of Fisheries, but preliminary trips showed no protected species interactions. The SRG was asked to review the State of Hawaii's application for an incidental take permit for Hawaii fisheries, in particular as it relates to negligible impact and conservation plans for monk seals.

Hawaii Abundance Estimates

Jay Barlow provided an overview of the abundance estimates for the Hawaiian Islands EEZ (PSRG 7). The new survey (HICEAS = Hawaiian Islands Cetacean and Ecosystem Assessment Survey) was conducted between August and November 2002, spanning a total of 6 ship months (4 on the David Starr Jordan and 2 on the McArthur). The tradewinds created rougher seas than during past cruises. The study area was stratified into two areas (a near-island stratum and an offshore stratum), because the near-island area was covered more due to re-fueling and port calls.

Coverage in good conditions, required for cryptic species such as beaked whales, was not uniformly distributed, which makes density estimation for these species problematic. Four species not previously reported in this area were documented: Frasier's dolphin, sei whale, Longman's beaked whale and minke whale.

Sighting rates were very low (averaging less than one per sea day), and sample sizes were too small to estimate abundance using previous analysis methods, in which the detection function is estimated for each species or species group. For the analysis of the HICEAS data, a new analytical approach was chosen, which modeled the detection functions based on ETP surveys. Table 4 in PSRG-7 provides the resulting estimates of abundance, including dive time corrections. All are low compared to other areas that have been surveyed by SWFSC, although densities may be similar to those on SWAPS in 1997, which surveyed between the West coast and Hawaii. CV's are high for most species (many species had only one sighting).

The study area covers an open water pelagic system with an unusual species assemblage, the lack of a continental shelf makes shelf-species much less abundant. In general there seems to be a break in the distribution of eastern and western species that occurs at Hawaii. False killer whales were only seen once, relatively far from the main islands, indicating that this species is not common in the area. The survey probably under-represents species in the nearshore reef areas (*e.g.*, spinner dolphins), and noted that SWFSC is contracting with Joe Mobley to collect data to better understand spinner dolphin populations.

The future ship survey plan includes support of the North Pacific humpback whale project (SPLASH) this year, a U.S. west coast survey in 2005, eastern tropical Pacific surveys in 2006-2007, and returning to Hawaii or the western Pacific in 2008.

Other Studies on Hawaiian Cetaceans
Jay Barlow presented an update on research conducted by Robin Baird under contract to SWFSC (PSRG-8), using funding from a new initiative that seeks to blend research with industry. Robin's study used a commercial whale watching vessel to conduct photo-identification and obtain genetic samples. They covered 8500 km, mostly in the leeward areas of the main Hawaiian Islands, and had 140 on-effort sightings. Only one sighting of false killer whales was made. The community of species seen and the proportions were similar to the HICEAS survey.

Photo-id results showed that bottlenose dolphins do not appear to move between areas, *i.e.*, they are recaptured in the area initial photographed. They move between shallow areas, but don't seem to be crossing deeper water. Jason Baker noted that researchers have documented movement of spinner dolphins crossing deep areas in the NW islands. Baird also documented an interesting bimodal distribution of Hawaiian bottlenose dolphins with water depth, suggesting that there may be two populations of bottlenose dolphins (nearshore and offshore).

Additional Hawaiian studies include an ongoing effort by Jan Ostman to update the spinner dolphin photo-identification database.

Cetacean mortality in the Hawaii longline fishery
Karin Forney presented mortality estimates of cetaceans in the Hawaiian longline fishery from 1994-2002 (PSRG-6). In addition to the Hawaiian EEZ, takes were also reported within the EEZ of Palmyra Island. Stratification by trip type (swordfish, tuna, mixed) could not be included in the analysis because the logbook data are problematic, and effort could not be reliably estimated for each trip type. Annual mortality estimates were thus made based on average take rates by species and total annual estimated fishing effort. Cetacean injuries were evaluated for severity based on guidelines in Angliss and Demaster (1998), using observer descriptions of the interactions. When the observer's record was not sufficient, species-specific prorating was used based on patterns of documented interactions. Take rates were highest for Risso's dolphins, short-finned pilot whales and false killer whales, and the distribution of takes mirrors effort. Mixed trips characteristics were more similar to the swordfish trips rather than the tuna trips. The point estimate for cetacean take rates was lower for tuna trips than swordfish or mixed trips. Tuna trips primarily interacted with false killer whales and pilot whales; swordfish trips took primarily Risso's dolphins. Risso's dolphin were all taken outside the EEZ. False killer whales are inside Hawaiian EEZ, Palmyra EEZ and in international waters.

Discussion ensued regarding the separation of the CA and HI longline fishery and associated interactions. Terry Wright thought this did not make sense, because they fish(ed) the same area in international waters. To assess the biological impact, it makes more sense to look at combined mortalities. Currently they are separated only because the fish are landed in different areas. This has lead to a perception that the northern swordfish fishery has gone away, when in fact it has just moved to CA. Past PSRG recommendations were to treat them the same. Also, the observed mortality only comes from US boats which are only 10% of the total international effort. Don Petersen indicated that by March 2004 the CA swordfish fishery will be closed due to new regulations.

Hawaii SARs

Karin Forney provided an overview of the HI SAR changes (PSRG 2a, 2b, 2c). All reports except blue whales have new abundance estimates (from Barlow 2003, based on 2002 HICEAS cruise). The SARs have updated mortality estimates (PSRG-7). There are 4 new stocks based on previously undocumented species observed during the HICEAS cruise: minke whale, Fraser's dolphin, Longman's beaked whale, and sei whale. PBRs are now available for all but 2 stocks (blue and minke whales).

False killer whales are the only strategic stock, and the abundance is now based on a comprehensive survey of all Hawaiian waters. In the past, there has been reason to assume that the abundance was underestimated, but now it seems possible that this is a small, insular population.

The SRG discussed the occurrence threshold for requiring a SAR for a species if the MMPA does not require them for species with remote likelihood of occurring within EEZ. In general, stock assessments are prepared when sightings are made during a line-transect survey. Jay Barlow stated that if species are not seen in future surveys and not taken in fisheries, they may be excluded from future SARs.

***Hawaii False Killer Whales*:** This strawman SAR combined the two EEZs and defined the entire Central Pacific region as one stock. This is less than desirable, because there may be unique island populations, and there are no abundance estimates for Palmyra even though mortalities are occurring there. Susan Chivers indicated that there are no genetic samples from Palmyra, but based on Hawaiian pilot whale results it is likely that false killer whales around Palmyra would be a separate stock. Biopsy samples from Palmyra are needed to resolve this.

Substantial discussion occurred regarding lack of abundance estimates around Palmyra, and how to deal with the mismatch of information for this and other stocks taken around Palmyra Island. The current draft SAR underestimates false killer whale abundance because whales around Palmyra are not included. There is a need to highlight that we do not have information to do a SAR and estimate PBR for many island associated species/stocks. Palmyra is so far from the main islands it is hard to justify extending the Hawaii population abundance to include it. As a separate stock, it would be based on geographic area, but then theoretically NMFS/SWFSC would need to add many (~60) new SARs to cover all territories and species. This issue has come up because the fishery has shifted south into these new areas and new EEZs. Tara Cox and Emily Menashes pointed out that there are other examples of multiple stocks with all takes treated together (*e.g.*, Atlantic bottlenose dolphins). It was noted that the Atlantic SRG recommended a joint meeting partly because of US EEZ issues around islands and other U.S. territories.

During the discussion, the SRG expressed a desire to stay with one SAR, but split out mortality and suggest where the situation is heading. Options include:

1) Keep Hawaii EEZ completely separate and either ignore Palmyra, or do a separate SAR for Palmyra for each species that has been taken there.
2) Keep Palmyra information in the Hawaii stock report and evaluate stock status based on total known abundance and mortality numbers. The report would also provide information on

abundance, mortality, and PBR separately for Hawaii and Palmyra EEZs. Palmyra abundance would be based on a range of densities (from ETP and Hawaiian surveys).

The group decided on Option 2, a single SAR for now, but with an explanation in the introduction that animals in the Palmyra EEZ are included, but there is a need to determine area-specific stock status. The SAR should provide information both as a combined stock (noting abundance/mortality area mismatch), and separately for Hawaiian EEZ (where abundance and mortality match) and for Palmyra (pointing to data gaps and bracketing abundance using densities found elsewhere). The stock name should remain 'Hawaiian Stock', but note that a Palmyra stock may be added later. This procedure should only be used for stocks that have mortality in Palmyra EEZ (false killer whale, short-finned pilot whale, spotted dolphin). It was suggested that density estimates from the ETP and/or HI be used to generate a range of estimates for the presumed Palmyra population.

As a result, Karin Forney used the HICEAS and Mobley *et al.* (2000) density estimates to provide a range of expected abundances for the Palmyra Island EEZ. She provided three different calculations: 1) applying only the HICEAS density to the entire Palmyra EEZ, with false killer whale takes being 10 times the PBR, 2) applying only the Mobley nearshore estimates to the entire Palmyra EEZ, with takes being ~50% of PBR, and 3) applying a stratified approach that uses the Mobley *et al.* densities in the nearshore 25nm area and the HICEAS densities in the rest of the EEZ, with the takes being over PBR. This is a provisional analysis that will be refined with ETP density data (Wade and Gerrodette). The SRG recommended combining the HICEAS and Wade & Gerrodette densities in the >25nm area around Palmyra, and using the Mobley *et al*. data in the nearshore 25nm area. These calculations should only be done for species and areas with observed takes in the Palmyra EEZ.

A final question was raised whether fishery mortality should be averaged over 5 years or only 2 because of all the recent regulatory changes. It was agreed that the changes affected mainly the swordfish component of the fishery, and a 5-year average would be appropriate because false killer whales are taken in tuna sets. Also, the fishery is still in a state of flux and regulatory changes, and a 5-year average is less subject to sampling variability.

***Rough-toothed dolphins*:** Terry Wright thought 'Other removals' did not need to go back so far in time, and the SRG agreed that information presented in all SARs needs to have a direct bearing on the current population status. For rough-toothed dolphins, these old removals should be deleted. Doyle requested that the statement about the recreational gillnet fishery be removed and noted that speculations about future regulations should not be in SAR.

***Risso's dolphins*:** The one unidentified cetacean in Palmyra EEZ does not warrant separating Palmyra. CA longline fishery information should be included along with Hawaii takes, because they were in same fishing area.

***Spotted dolphins*:** Caveats about Palmyra takes in this SAR need to be included.

***Short Finned Pilot Whales*:** Caveats about Palmyra takes in this SAR need to be included. It was noted that handling of mortalities is tricky because genetics are showing a lot of structure in the ETP.

***Blue Whales*:** This SAR had a name change to reflect recent acoustic information. The change was coordinated with AKFSC, and for now it will be called Western Pacific stock based on calls.

***Fin Whales*:** The SRG recommended removing gillnets as a source of human mortality for species that are not very nearshore.

***Central N. Pacific Humpback whales*:** John Calambokidis has produced a new population estimate of 8-10,000 animals. The overall trend is consistent with a 7-8% growth rate from post whaling population size to present population size. The SPLASH project (2004-2006 photo-id and mark-recapture analyses, see below) will improve current estimates. SE Alaskan population has shown a natural mortality rate of 5% per year, which is the same as CA humpbacks. Calving rates are also the same, so the growth rate should be similar. Prince William Sound: may have density dependent effects in age at maturity and calving interval; however, these changes may just be the result of long term cycles. Populations are increasing in central Pacific. The recovery factor has not been changed (still using factor of 0.1, Nmin is set at 3,600). A higher recovery factor should be considered based on the criteria discussed by Taylor *et al.*

The SRG questioned using Rmax of 4% even though known Rmax's are 8-10%. The recovery factor should be 0.3 but it is 0.1. The Alaska SRG did not believe that higher values were warranted. Pacific SRG requests that the SAR justify the use of the lower values.

CA/OR Thresher Shark/Swordfish Drift Gillnet Fishery

Don Petersen gave an overview of this fishery (mesh size 18-22 inches for targeting swordfish), which is known to take cetaceans, pinnipeds and sea turtles. Following the formation of a Take Reduction Team, the fleet has been using pingers and 36-ft extenders since the 1995-96 season at an effort level of about 3000 sets. There have also been recent closures due to takes of sea turtles. Last year there were only 1300 sets, reflecting a reduction in the number of vessels. The list of species caught is much smaller. A large area off northern California and Oregon is closed to protect leatherback turtles, but even when this area is open, little fishing occurs there. Most fishing therefore occurs off Southern California and, for a few boats, off Washington. There has also been a change in seasonal patterns, and they are switching to albacore when catches are good. Observer data show good compliance, with pingers on every boat observed and the majority of boats having a the full complement of pingers. Although marine mammal takes are down in this fishery, there will be a strategic stock next year because one pilot whale was observed killed this year.

***Driftnet Fishery Take Reduction Team*:** Karin Forney provided an update of the June 2003 TRT meeting. No stocks have takes above PBR, and only three species are above 10% of PBR. Although mammal takes have gone down, much of this reduction is effort-related, and takes per trip are in fact up. Also, fishery effort has decreased, the proportion of unobservable boats has increased, and the TRT was interested in other platforms that may be used to monitor the fleet. Pinger compliance is good overall, and the TRT encouraged continued checking of pinger

function, and using pingers that stay on all season. The Coast Guard and NMFS enforcement attended and commented that methods are needed to quickly assess whether boats are in compliance with pingers.

A multispecies perspective was desired so sea turtles were discussed. Jeff Seminoff, a NMFS/SWFSC sea turtle biologist attended and fishermen were also present. The fishermen are interested in opening northern areas (OR and WA), and requested research on turtle distributions in the area. NMFS has research underway (including satellite tracking and surveys) to try to identify habitat and migration routes for turtles, to provide a basis for considering whether areas could be re-opened without harming turtles. Pacific leatherbacks are declining everywhere they are monitored. Loggerhead populations are also very small, and they migrate through longline fishing areas during their return from Mexico to breeding beaches in Japan. It was discussed that the longline fishery has higher turtle interactions than the drift gillnet (although not all hookings lead to death).

The TRT drafted a letter asking that longline interactions with turtles be researched so that turtles are not killed in that fishery, causing more restrictions are placed on gillnets. Pete Dupuy pointed out that the letter was drafted during the meeting and thought to be consensus, but there were disagreements in e-mail exchanges afterwards. Sea turtles were addressed during the meeting even though it is a marine mammal TRT, because there was a direct ESA connection and sea turtles are driving most of what is occurring in the fishery. The SRG commented that this shows a need for multi-species approach. The fishery has done a lot to mitigate marine mammal interactions, but actions now appear pre-empted by sea turtle concerns. Closures in southern CA, for example, were based on sea surface temperature relationship with turtles.

It was discussed that a coherent multi-species approach to management is needed, and it is essential to integrate multispecies issues in TRTs. This poses a problem, because different species are managed under different laws (MMPA, ESA, MBTA). Doyle Hanan added that there is a need to bring the Fisheries Management Council into this issue because the FMP is being affected by turtle takes, and jeopardy may be found. If the fishery mitigates the problem, it may still be allowed to operate (*e.g.*, turtle mortality offset by work on nesting beaches)

Small-mesh Drift Gillnet Fishery

Don Petersen presented an overview of this relatively new fishery, targeting white sea bass, yellow tail, barracuda, or tuna with smaller mesh (~7inch) driftnets. There was some controversy because the Coast Guard was boarding and demanding pingers for these driftnets, and NMFS had to clarify that this was a different fishery and hence the TRT regulations did not apply. The fishery has now been observed for 2 years, and one cetacean and some pinnipeds have been observed taken so far. The same gear is used as in the setnet fishery, but it can be set or drifted depending on target species (observers record the method). The fishermen decide what species they are targeting, and the methods seem to be very efficient at catching only that species. Because of the dynamic nature of this fishery, the percentage of coverage is unknown, perhaps around 10%. There also has been some difficulty getting information from the CDFG, as it is hard to categorize the information needed because of the different species targeted. The fishery will again be observed next summer. Pete Dupuy pointed out that the Highly Migratory Species (HMS) FMP will not allow this small mesh fishery to land tuna.

Future Observer Programs
The Southwest Region plans to observe some additional fisheries in the future:
1) California purse-seine fisheries, which operate year-round targeting coastal pelagic species (anchovy, mackerel, squid) under MMPA authorization.
2) Tuna fisheries (bluefin) under HMS FMP authorization.
3) Albacore troll fishery, a large fishery under HMS FMP authorization;
4) HMS recreational fisheries, including charter and private vessels under HMS FMP authorization.

California State Issues
Dale Sweetnam gave an update regarding California Department of Fish and Game. The budget situation is grim, the Department is laying off 150 people, and the Director and Deputy Director have left. The single marine mammal person (Bob Read) has been re-assigned to other tasks, and CDFG will no longer produce effort estimates for the CA gillnet fisheries. John Heyning noted that this undermines NMFS efforts and is a huge problem the group will need to consider. Regarding state-regulated fisheries, an emergency closure was requested for squid fishing within 1 mile of the Farallon Islands (because of seabird disturbance) and between Oregon border and Point Reyes, CA (because of salmon bycatch).

SPLASH Project
Jay Barlow provided an overview of SPLASH (Structure of Populations, Levels of Abundance, and Status of Humpbacks) in the North Pacific basin. It is part of the large whale initiative designed to provide data on possible downlisting, but it bigger than this initiative. Goals include obtaining basin-wide abundance estimates, genetic samples for each stock, and an understanding of movement patterns. Field schedule involves field work 1) in the winter breeding areas during 2004 (*e.g.*, starts in Dec. 2003), 2005, 2006, including Mexico, Costa Rica, Hawaii and islands of western Pacific, and 2) summer breeding areas during 2004, 2005, including Russia, US west coast & Alaska, and part of Canada's west coast. All projects will collect genetic samples, which will be archived at SWFSC and analyzed by Scott Baker. John Calambokidis will do mark-recapture photo-id analyses. Financing for the first year is still needed to cover SWFSC and NMML cruises; but funding is available for Hawaii winter field sampling and summer field sampling in most areas.

***Delphinus* Stock Structure**
Short-beaked common dolphins pose a challenge for stock structure studies, because they are abundant, have high genetic diversity, and are essentially continuously distributed throughout their range. Susan Chivers presented genetics data for this species. Four stocks are currently recognized: Southern ETP, Central ETP, Northern ETP, and CA/OR/WA, and they are defined primarily based on geographic gaps in distribution. To summarize knowledge of species, they are found in the warm water masses off the coast of Southern California and in offshore areas of central/northern California. They appear mostly absent from colder nearshore areas except when waters are warmer. Population boundaries may be defined based on longterm oceanographic averages. Their dorsal fin morphology shows a gradation from white in north, black in central stocks, and adult size varies (central is largest, north is smallest, south is middle). Contaminants show a gradient in chlorinated hydrocarbons with south > north. Reproduction is year-round in

ETP and shows more of a peak in Southern California. Genetic data reveal high genetic diversity from 63 samples analyzed, stratified based on sampling gaps (geographic). The data suggest that there could be a distinct southern CA stock. Future work could analyze up to740 biopsy samples that are available; initially will analyze 150: 50 each in 3 strata, hopefully during the next year.

Genetic Archive Initiative

The genetic collection is increasing with time, but there are thousands of samples in freezer that have not been analyzed, and the samples are deteriorating. Barb Taylor at the SWFSC is putting together an initiative to DC so that the samples, nationwide, can be curated, so it is in one place and accessible. There will be parallel proposals for fish.

Harbor Porpoise Abundance

Jim Carretta provided an overview of updated abundance estimates for CA harbor porpoise, which include the survey completed during 2002 (PSRG-10). Methods and analysis are the same as used previously, and include Aug-Nov 1999 and 2002 survey data. There were 8026 km of transect surveyed in Beaufort 0-2, with 754 groups sighted. Transects included the new (beginning in 1999) 'offshore' region between the 90m and 200m isobaths. Abundance was estimated for four separate stocks: *Morro Bay* and *San Francisco/ Russian River* stocks had somewhat higher abundance, *Monterey Bay* appears unchanged, *No. CA/S. OR* not yet known because don't have OR survey data analyzed yet. The reason for the apparent increase in the former two stocks is not known, but it could be because offshore areas were included. Replicates of offshore areas will help determine whether this hypothesis is true. CV's are similar between years, and dominated by the g(0) correction factor CV. Unless a more precise g(0) becomes available, there will not be improvements in the precision of these estimates. Michael Scott inquired about environmental correlates. Karin Forney explained that there appeared to be a tight relationship with SST through 1993, but it broke down after this, suggesting that the system is more complex. In conjunction with leatherback surveys, NMFS is now getting fine-scale distribution information in Monterey Bay that may shed light on some of these questions.

2002 Gillnet Mortality Estimates

Jim Carretta gave an overview of the updated estimates of mortality for CA/OR gillnet fisheries **(**PSRG 11). The setnet fishery was permanently closed <60 fms between Pt. Reyes and Pt. Arguello in late 2002. There was some effort during the early part of the year when the emergency closure lapsed, but the fishery was not observed after 2000. Mortality was therefore estimated using 2000 entanglement rates and 2002 effort estimates. Harbor porpoise mortality is estimated at 16, which exceeds PBR. Off southern California, mortality was estimated from 1990-94 entanglement rates and 2002 effort, but take rates may be different now because the fishery has moved offshore, and possible shifted to other species. The drift gillnet fishery was observed for 360 days, 20% coverage. Estimated mortality is low relative to PBR for all stocks, and looks like it is below 10% for most. Next year there will be a strategic problem again for short finned pilot whales, which were observed taken during 2003. Also, because of budget cutbacks, CA Fish and Game will not provide effort information anymore, so a new method for estimating effort is needed. Access to the logbooks is expected to be available. A request was made to separate out Washington sets.

West Coast SARs

***Monterey Bay Harbor Porpoises*:** Recovery factors need to be updated for Morro Bay and Monterey stocks based on fishery mortality CVs. The PBRs will change accordingly; for the Monterey Bay stock the PBR will be 10. Although PBR is exceeded, the fishery was closed in September 2002, so this is no longer a problem. Karin pointed out that there is an updated plot of abundance trends that will replace Figure 2.

***San Francisco- Russian River Harbor Porpoises*:** Karin Forney noted that there still are occasional human-related strandings with unknown cause. She has looked into it, but has been unable to determine the responsible fishery.

***Eastern North Pacific Humpback Whales*:** Jay Barlow noted that during the last meeting, we were concerned about declines. But new estimates indicate an increase that cannot just be explained by population growth. It seems that there is some variation in the estimation procedure. Rmax is 8%, which is specific for this population and based on the time series 1990-1998. The Recovery factor = 0.1 because the population size is low.

***Blue Whales*:** John revised blue whale estimates with 2000-2002 mark recapture data and Jay updated line-transect analyses including 2001 cruise. The estimated population size has increased.

***Southern Resident Killer Whales*:** Garth Griffin provided updates on this stock and the ESA/depleted listings. Although there are problems with population size and health of individuals and pods, a finding was made that listing under ESA is not warranted. NMFS was sued, and a ruling is expected during the coming weeks. The NMFS has made a 'depleted stock' designation. This requires a conservation plan, and a meeting was held in May 2003. It was decided that NMFS take immediate actions to reduce interactions (boater education, enforcement), and to identify factors causing decline. Individual chapters in the recovery plan will address major factors for decline, and workshops on these factors will be held. The basics of the conservation plan will be finished and ready for review by end of 2004.

The Science center is continuing to identify high priority research needs in four primary areas: 1) evolutionary relationships, 2) noise and vessel interactions, 3) prey, and 4) winter distributions. Pollutants are being studied as well. The SRG recommended looking into the value of Rmax. The growth rate is what has been measured during over a period of increase that corresponds to good salmon years.

***North Pacific Right Whales*:** There was concern among the SRG that not calculating a PBR because the available information is inadequate sets a bad precedent (PSRG 5a). The SRG recommends that the SAR should use the information that is available to calculate PBR, as was done for Hawaiian monk seal under similar situation.

Joint Meeting of SRGs

Topics for a potential joint meeting of the SRG, proposed for April 2004, were discussed.

1) Creating separate management units for the multiple EEZs surrounding islands

2) NMFS funding priorities
3) Reviewing the Serious Injury Report
4) Discussion of a new SAR schedule
5) Stock separation and inconsistencies with GAMMS2 recommendations
6) ZMRG.

The possibility of having the meeting in the fall, or sending only a few representatives to the joint meeting was discussed. Karin Forney commented that Atlantic and Alaska wanted to work out the issues before the next round of SARs so the decisions could be incorporated in the fall. The general sense was that an April meeting would be good, but that funding would probably limit the number of participants.

Topics For Next Meeting

Hawaii has been suggested as the next venue due to the continuing prominence of issues from this region. Lilian Carswell pointed out, however, that USFWS would not support travel to Hawaii for an SRG meeting. Potential topics for the next meeting could include:

1) Separate management units for Pacific Island EEZs
2) ZMRG (although this may need to be done sooner via a conference call)
3) MMPA reauthorization
4) Hawaii set gillnet update
5) Harbor porpoise estimates and stock boundaries for northern areas
6) Genetics from Hawaii for a suite of species
7) Longline fishery update
8) Southern CA small-mesh driftnet fishery observer program update.

Review of Previous Research and Management Recommendations

The SRG has repeatedly recommended that the Hawaii pelagic longline fishery be recategorized from a Category-III to a Category-II fishery because observer data indicated serious injuries have occurred to marine mammals and the take of one species (the false killer whale) is still above PBR, and to make this fishery consistent with other U.S. longline fisheries, including the California-based fishery whose fishing grounds overlap those of the Hawaii-based fishery.
No action has been taken on this recommendation. The NMFS is currently being sued by environmental groups to make this a Category-I fishery based on the mortalities of false killer whales that are above PBR.

Identification of marine mammal incidental takes to species and population within a species is critical for management of marine mammal stocks. The Pacific SRG recommends that NMFS implements a standard protocol of photo documentation of each take and biopsy sampling whenever possible.
This recommendation has been adopted by the observer program for Hawaii-based pelagic fisheries.

The SRG recommends that the USFWS update and finalize its Stock Assessment Report on southern sea otters so that the USFWS and the SRG can meet their statutory responsibilities under the MMPA to review annually the Stock Assessment Reports of strategic stocks. The last SAR on southern sea otters reviewed by the SRG was a draft version updated in 1997.
The Southern Sea Otter SAR was updated for review at this meeting of the SRG.

RESEARCH AND MANAGEMENT RECOMMENDATIONS
Pacific Scientific Review Group – November, 2003

The SRG has previously noted that management of marine mammal-fisheries interactions have often been complicated by management and legal decisions concerning other protected species such as sea turtles and sea birds and recommended that Take Reduction Teams include members with expertise in all protected species affected by the fishery, and that the Team consider these multiple-species problems in its recommendations. As a result, a NMFS sea turtle biologist has been providing expertise to the CA drift-net Take Reduction Team and this has proved to be essential. As multi-species bycatch issues have become more common, however, the SRG recommends even tighter integration in the management of marine mammal, sea turtle, seabird, and other bycatch species.

With the completion of the ship surveys for marine mammals in Hawaiian EEZ waters, gaps in scientific knowledge about population size, distribution, and discreteness that are necessary for marine mammal management have become apparent. The SRG recommends the following studies.

1) Mark-recapture, biopsy, and tracking studies of false killer whales and other cetaceans around the main Hawaiian Islands.
2) Aerial surveys within 25 nm of the Hawaiian Islands to estimate abundance of species such as spinner dolphins that occur close to shore in waters that could not be covered by the 2002 shipboard surveys.
3) Regular censusing of monk seal haulouts in the main Hawaiian Islands to monitor population status, movements of marked animals, and human interactions.

In light of recent changes in the California- and Hawaii-based longline fisheries, the SRG recommends the following management and research actions.

1) Each longline fishery should be categorized by its principal target species and fishing grounds rather than the state of origin. This would likely result in three fisheries: a swordfish fishery operating between the West Coast and Hawaii (currently based in CA, but formerly based in HI), a tuna fishery operating in the Central Pacific (based in HI), and a tuna fishery operating in the northeastern Pacific (based in CA).
2) As the SRG has recommended repeatedly in the past, these fisheries should all be listed as Category-II fisheries.

Assigning fishery mortality in the EEZs of US territories to individual marine mammal stocks is problematic because of the lack of population estimates for these areas (and the associated lack of a calculable PBR) and the likelihood of separate island stocks. Cetacean mortalities associated with the Central Pacific tuna longline fishery have been documented in the US EEZ around Palmyra Island; research in these waters should include surveys for abundance estimation, and biopsy and tracking research for study of population discreteness and movements.

Identification of marine mammal incidental takes to species and population within a species is critical for management of marine mammal stocks. The Pacific SRG recommends that the NMFS implements a standard protocol of photo documentation of each take and biopsy sampling whenever possible.

The current sea otter censusing methodology underestimates abundance because there are no corrections for diving behavior and other factors. The SRG recommends that 1) the actual census data be presented along with the 3-year running mean, 2) aerial counts be corrected for diving behavior, sea state, and other factors, and 3) aerial surveys be conducted only under favorable weather conditions.

The SRG recommends that the USFWS revise and finalize its Stock Assessment Report on southern sea otters so that the USFWS and the SRG can meet their statutory responsibilities under the MMPA to review annually the Stock Assessment Reports of strategic stocks.

Appendix 1

Attendees at the 14th Meeting of the Pacific Scientific Review Group

Scientific Review Group- Pacific Region:

Hannah Bernard	Hawai'i Wildlife Fund
Robin Brown (not attending)	Oregon Department of Fish and Wildlife
Mark Fraker	Terramar Environmental Research
Doyle Hanan	Hanan & Associates, Inc.
John Heyning	Natural History Museum –Los Angeles County
Chuck Janisse (not attending)	Federated Independent Seafood Harvesters
Steve Jeffries	Washington Department of Fish and Wildlife
Katherine Ralls	Department of Conservation Biology, Smithsonian's National Zoological Park
Michael Scott	Inter-American Tropical Tuna Commission
Terry Wright	Northwest Indian Fisheries Commission

Invited Participants and Observers:

NMFS Southwest Fisheries Science Center
Jay Barlow
Jim Carretta
Susan Chivers
Kerri Danil
Karin Forney
Jessica Redfern
Steve Reilly
Barb Taylor

NMFS Southwest Region
Jessica Condel
Monica DeAngelis
Emily Menashes
Don Petersen
Jeremy Rusin

National Marine Mammal Laboratory
Garth Griffin

NMFS Pacific Islands Fisheries Sci. Center
Jason Baker

NMFS Pacific Islands Region
Margeret Akamine
Lewis Van Fossen

USFWS
Lilian Carswell

Marine Mammal Commission
Tara Cox

California Department of Fish and Game
Dale Sweetnam

Invited Experts
Pete Dupuy
John Hall

Appendix 2

List of Background Documents

PSRG-1	CA/OR/WA draft 2004 Stock Assessment Reports (Carretta, Barlow)
PSRG-2a	HI cetaceans draft 2004 Stock Assessment Reports – Part I (Forney)
PSRG-2b	HI cetaceans draft 2004 Stock Assessment Reports – Part II (Forney)
PSRG-2c	HI cetaceans draft 2004 Stock Assessment Reports – Part III (Forney)
PSRG-3	HI monk seal draft 2004 Stock Assessment Report (Baker)
PSRG-4	So. resident killer whale Draft 2004 Stock Assessment Report (Hanson)
PSRG-5a	Alaska SARs for Central N Pacific humpback, right whale (Angliss)
PSRG-6	Estimates of cetacean mortality and serious injury in the Hawaii-based longline fishery, 1994-2002 (Forney)
PSRG-7	Cetacean abundance in Hawaiian waters during summer/fall of 2002 (Barlow)
PSRG-8	Studies of odontocete population structure in Hawaiian waters: results of a survey through the main Hawaiian Islands in May and June 2003 (Baird et al.)
PSRG-9	A feasibility study to evaluate using molecular genetic data to study population structure of eastern North Pacific *Delphinus delphis* (Chivers et al.)
PSRG-10	Preliminary estimates of harbor porpoise abundance in California from 1999 and 2002 aerial surveys (Carretta and Forney)
PSRG-11	Preliminary estimates of marine mammal mortality and biological sampling of cetaceans in California gillnet fisheries for 2002 (Carretta and Chivers)
PSRG-12	SPLASH update document
PSRG-13a	Draft revised Guidelines for Preparing Stock Assessment Reports Pursuant to the 1994 Amendments to the Marine Mammal Protection Act (Angliss).
PSRG-14	Southern sea otter draft 2004 Stock Assessment Report (U.S. F&WS)
PSRG-15	Proposed Rule on ZMRG (Federal Register 68(131):40888-40892, 07/09/2003)
PSRG-16	List of Fisheries 2003 (Federal Register 68(135):41725-41741, 07/15/2003)
PSRG-17	California pelagic longline observer program status report, Oct 2001-May 2003 (Petersen)
PSRG-18	Differences between the 2003 and draft 2004 Southern Resident killer whale SARs (Hanson/Griffin)

Appendix 3

Agenda for Pacific Scientific Review Group Meeting
La Jolla, California
17-19 November 2003

Monday, 17 November 2003 (1300h)
Introduction
General Topics
Update on NMFS re-organization (Jay Barlow)
Update on ZMRG definition (Emily Menashes)
MMPA re-authorization (Emily Menashes)
GAMMS II summary (Barlow/Forney, Wright, Jeffries)
List of Fisheries 2003 (Emily Menashes)
Coordination with Marine Mammal Commission (Tara Cox)
Sea Otters (Lilian Carswell)
Southern sea otter SAR
WA sea otter research
Monk seals
Update & SAR review (Jason Baker**)**
Review recommendations
SRG Procedures

Tuesday, 18 November 2003 (0900)
Fishery updates
CA longline fishery
Regulation/FMP update (Emily Menashes/Don Petersen)
CA longline observer program (Don Petersen)
Description of fishery (Pete Dupuy)
Hawaii longline fishery
Regulation/legal update (Lewis Van Fossen)
Observer coverage levels & update (Lewis Van Fossen)
Description of fishery (John Hall)
Other CA observer programs
Current program updates (Don Petersen)
Future programs (Don Petersen)
TRT update (Karin Forney)
Hawaii stock research and assessments
2002 survey abundance estimates (Jay Barlow)
Summary of HI dolphin studies (Jay Barlow)
HI longline mortality estimates (Karin Forney)
Future research plans for Central Pacific cetaceans (Jay Barlow/Karin Forney)
Review recommendations

Wednesday, 19 November 2003
SRG Procedures

Hawaiian Cetacean SARs (Karin Forney)
Southern Resident Killer whale Update (Garth Griffin)
CA/OR/WA research & stock assessments
SPLASH project overview (Barlow)
Delphinus stock structure (Chivers)
Genetics Archive Initiative (Taylor)
New harbor porpoise abundance estimates (Jim Carretta)
2002 Gillnet mortality estimates (Jim Carretta)
Review CA SARs (Jim Carretta)
Review WA SARs (Garth Griffin)
Discuss recommendations
Topics, timing, and location for next meeting
Adjourn