

Minutes of Meeting of the Scientific and Statistical Committee (NPFMC)
Held in Juneau, Alaska, June 15 and 16:

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met in Juneau, Alaska, on June 15 and 16 with the drafting teams of the Tanner and Gulf of Alaska Trawl Management Plans. All members of the Committee were present for the session, which was concerned with a critical review of the two plans.

The Committee identified need for further comment and discussion concerning the rationale and supporting scientific data associated with Tanner crab regulations dealing with, inter alia: (1) pot limits, (2) exclusive registration areas, (3) seasonal closures, (4) the optimum yield (OY) established for opilio and bairdi in the Bering Sea, (5) size limits, and (6) harvest guidelines.

The Committee, in addition, commented on the adequacy of the plan as it related to statistical reporting requirements, documentation of its conclusions, new research direction, and cost of management. A number of editorial reviews were identified, and each member of the Committee was requested to submit written statements to assist the drafting team in making change for errors of this character.

As regards to the trawl plan, the SSC asked for further clarification of (1) methods of calculating equilibrium yield (EY) and its relationship to the allowable biological catch (ABC); (2) the nature of the options presented in the plan; (3) the need to address questions of consumer interests; (4) domestic allowable harvest (DAH) calculations; (5) the inclusion of joint enterprise activities in the plan; (6) methods of handling latent fisheries development; (7) research needs; and (8) the potential requirement to establish a minimum ^{mesh} size limit.

Exclusive Area Registration--Tanner Crab

The Committee noted that the exclusive area registration used in certain management areas might be in conflict with the fourth National Standard in as much as it may tend to discriminate, if not in form, in substance, against certain elements of the fleet. The committee, however, did not feel competent to decide this issue, and hence raises the matter as one of potential legal concern.

Pot Limitations--Tanner Crab

Several members of the Committee noted that pot limitations imposed in several areas were of limited use in achieving conservation goals and perhaps discriminated against certain vessel classes. The Committee noted, however, that the area of concern associated with directed pot limits was totally within the jurisdiction of the State of Alaska and hence did not apply to the area under the Council's jurisdiction. The areas of "nondirected" pot limits may raise legal questions which should be addressed by the Council as regards their adherence to the National Standards. The SSC did not feel that pot limits set within State waters would distract from conservation and/or OY goals established for regulating within the 200-mile zone.

Seasonal Closures--Tanner Crab

The SSC supported, in principle, the concept of seasonal closures to minimize dead loss. Dead loss as used by the Committee was concerned with the aggregate of mortalities imposed by handling and releasing, as well as carrying crabs to ports of delivery. The SSC, however, felt

that adequate data was not available in the plan nor referenced to allow it to pass judgement on proposed closure dates. The Committee requested that tabular data showing shell condition and dead loss estimates by months for all areas, where such information was available, be prepared and submitted to the Council at its June meeting. It was also recommended that factors influencing dead loss be studied and quantified. The Committee also noted that, although dead loss rates may differ between the United States and Japanese fleets, where closure dates for Tanner crabs are established for "condition" factors, they should apply when practical to both domestic and foreign fleets.

Optimum Yield for Bering Sea Stocks--Tanner Crab

In the absence of specific instructions from the Council regarding goals and/or objectives of an OY-nature concerned with the C. opilio stocks in the Bering Sea and supporting justification in the plan, the SSC was not in a position to *evaluate* or recommend a specific departure from the ABC for socioeconomic or ecological purposes. The Committee noted in the preliminary management plan that the OY was set taking into account historical catch trends, the uncertainty regarding the impact of an expanding foreign fishery on U.S. markets, and on potential ecological interactions. The Council may wish to reconsider these factors in establishing an OY for 1978. ?

The Committee noted that the OY for C. bairdi was set taking into account density profiles and market values for the U.S. fleet. Increased demand and product value, however, may by 1978 render the analysis

"out of date." The Council may wish to adjust the OY upwards to a DAH to accommodate changes in the economic capability of the U.S. fleet to harvest at lower density levels (e.g., 29-35 thousand tons).

Size Limits--Tanner Crab

The size limit proposed by the drafting team for C. bairdi is 140 mm ^{5.5} (56 inches). The limit has been suggested in order to provide a high degree of protection for mature males in order to insure maximum fertilization of the female population. The drafting team noted that the size limit constituted a conservative approach which was consistent with management practice in Alaska, particularly when the vital biological rates of the animal being regulated and dynamics of the populations were uncertain. The 140 mm size limit would ^{protect} almost 100% of the immature and newly matured crabs as well as about 30% of the previously matured males.

It was noted, however, that recent data submitted by NMFS on maturation, growth, and yield per recruit provides additional information which should be considered in determining size limits for C. bairdi. This document suggests that under current harvest strategies the harvest potential could be substantially increased by lowering the size limit to between 102 and 120 mm. The increase in yield (assuming the parameters used in the NMFS model were reasonable) obtained by such a reduction in size limit would be greater than 50%. The consequence in terms of loss of mature males between 120 and 140 mm might be about 40% of the population of this group.

The SSC could not come to a consensus view regarding the potential degree of risk or the loss associated with the two methods of setting size limits. Although no consensus could be reached as regards a specific size limit, the group did feel that the size limit for the 1978 season should not be set below 5 inches (127 mm), and all concerned agreed that a reduction to 5.3 inches (135 mm) was unlikely to harm the reproductive capacity of the stocks.

Harvest Guidelines--Tanner Crab

The SSC noted that harvest guidelines were "guidelines" and should not be perceived as quotas but as operational ranges available to management during a particular season.

General Comments--Tanner Crab

There was a feeling on the part of several members of the Committee that the plan failed to provide the information and/or referenced material upon which independent judgements could be made on various management strategies or regulations proposed. In addition, the SSC felt that there was not adequate identification of statistical needs or additional research to improve the quality of management. The SSC pointed to the need for: (1) better catch effort data, (2) resource assessment activity, (3) stock recruitment information, (4) the impact of environmental factors on recruitment, and (5) specific socioeconomic studies. Finally, the plan failed to identify management costs and projected revenues.

Methods of Calculating EY and Its Relationship to ABC--Trawl

The SSC questioned the drafting team concerning the use of EY and ABC. There was some feeling that the introduction of the EY concept into the plan was unnecessary and matters associated with year-to-year variation in recruitment and population size could be adjusted for under ABC. The Committee, however, concluded that the EY information should remain as it provides useful information to follow the basis for establishing the ABC.

Nature of Options Presented in the Plan--Trawl

The Committee felt that the options presented in the plan as extremes were perhaps not really extremes at all but did require the Council to make a choice in favor of one fishery vis-a-vis another. In this sense, the SSC felt that there were intermediate options that would allow for effective growth and development of trawl fisheries to occur while minimizing its impact on halibut or other nontarget species. The Committee requested that the management team consider revision of the plans to achieve this goal, but suggests that such revision await comment on the part of the Council.

Questions of Consumer Interest--Trawl

The Committee noted that the plan did not include any information dealing with the issue of consumer interests. The management team, however, informed the Committee that such information was being prepared and would be incorporated into the next version of the draft plan.

Domestic Allowable Harvest Calculations--Trawl

There was some concern regarding methods of estimating DAH. However, in general, the SSC was satisfied that the drafting team had used the best information available, which was largely submitted by industry. It was important, however, to the Committee that in selecting options some mechanism be considered for adjusting within season to unexpected growth patterns or failure to produce on the part of U.S. industry.

Joint Enterprise --Trawl

The Committee quizzed the drafting team on the inclusion of the joint Korean enterprise as a part of the U.S. production plans. It felt that the issue, however, was not of a technical character and must be resolved by the Council.

Research Needs--Trawl

The Committee noted that at the present time the plan failed to incorporate research needs and the management plan team leader promised to incorporate such requirements in the next draft.

Minimum Size Limit--Trawl

The SSC proposed to the management team that it seemed desirable to establish a minimum mesh size limit for the trawl fisheries operating in the Gulf even though a great deal of information is not yet available concerning mesh selectivity for the target species. It was noted, nevertheless, that U.S. trawl surveys employing 3" mesh sizes showed it was normally adequate for harvesting the species complex of the area. The

drafting team was requested to examine historical mesh-size data on perch and other species and determine whether or not a mesh limitation would be desirable for the Gulf trawl plan.

Committee Views on Options in Terms of Management Strategy

The SSC generally felt that Option I.B.2 was preferred in combination with Option III.C. It felt it did not want to comment on the options concerning priorities between species, and as noted above, tended to lead to a polarized situation and hence preferred something of an intermediate character.

General Comments

The Committee also noted that there may be some problem with harvest of latent species, but there appeared to be a method for dealing with this through plan modification. The Committee noted that the trawl plan as well as the Tanner crab plan seemed to be disaggregated, but the problem was one of the SSC outline rather than the drafting committee. Hence the SSC will attempt to rearrange the outline in order to obtain the essential information in the plan and place much of the descriptive material in an appendix.

6/23/77

SUMMARY REPORT ON 1977 U. S. HERRING FISHERY IN THE BERING SEA

The developing U.S. commercial herring fishery in the Bristol Bay area was reviewed by the SSC during our meeting Thursday afternoon. Preliminary information presented by ADF&G indicated that the total U.S. commercial and subsistence utilization will exceed 3,000 tons from the Bering Sea stocks this year.

The commercial fishery was conducted within State waters largely with Kulukah Bay area by the use of purse seine and gillnet gear. At this time the ADF&G has documented through fish tickets a total harvest of 2,586 tons. Outstanding tickets are expected to increase the total commercial catch to 2,900 tons. Subsistence catch data is not available at this time, but will be collected later this summer.

Purse seine gear proved to be most effective with 80% of the catch being taken by this gear type. The wave type spawning which occurred provided for a substantial mix of spawned out and prespawn herring and recovery rates from the gillnet caught fish was generally quite low.

Recovery rates varied by processor but were in the acceptable range of 9-10%.

Effort data is preliminary at this time, but a minimum of 6 purse seine and 35 gillnet gear units were utilized in the fishery.

Two of the larger processing companies had planned to conduct harvests on other spawning stocks north of Bristol Bay this year, up to and including the Norton Sound area. These plans were not carried out due to late break up of the ice pack.

Generally, the fishery was viewed as being successful and considerable interest has already been expressed by fishermen and processors in further developing the fishery next spring. With the knowledge gained this year, and the expressed interest, it is quite possible that Bering Sea herring utilization by U.S. fishermen will double in 1978.

The Bering Sea PMP for Bering Sea trawl fisheries provides for a 1977 ABC of 21,000 MT. Of this total the PMP provides an allocation of 1,000 metric tons to the U.S. fishery, largely for utilization by the long standing subsistence fisheries along the Alaska northwest coast.

With the increased U.S. commercial harvest and with the high probability of the USSR and Japan again initiating a trawl fishery in November and December the 1977 ABC may be exceeded.

Two options for resolution of this problem were explored by the SSC and are presented to the Council for determination of a Council action. These included (1) a reduction of the FAC by the amount of the increased U.S. harvest on the November-December portion of the foreign harvest and (2) revision of the PMP for 1978 to accommodate the increased harvest by U.S. fishermen in 1977 and the projected US harvest for the spring of 1978.

Biologically either option could be pursued however, the SSC noted that the second option would cause the least disruption of the fisheries.

As the composition of the stocks fished in November and December are not expected to change significantly in the new quota year beginning January 1, a reduction in the 1978 quota would have the same effect as a reduction in the F.A.C. during November and December of 1977. In addition, the potentially increased capacity of the U.S. fishery could be accommodated simultaneously.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest and Alaska Fisheries Center
2725 Montlake Boulevard East
Seattle, Washington 98112

June 29, 1977

#14

Mr. Jim Branson, Executive Director
North Pacific Fishery Management Council
P.O. Box 3136DT
Anchorage, Alaska 99510

Dear Jim:

Please find attached minutes of the SSC sessions held on June 15-16 (Juneau), and June 22-24 (Anchorage). The minutes of the June 15-16 meeting represent the official comments of the SSC related to the Tanner crab and trawl plans and should be attached to the two plans. You may want to split them out as appropriate.

Sincerely,

Dayton L. Alverson
Chairman, SSC

Enclosures (2)

cc: Rasmuson w/enclosures
SSC members w/enclosures



CONFIDENTIAL
This document contains information which is exempt from disclosure under the provisions of the Freedom of Information Act, 5 U.S.C. 552, because its disclosure could result in the identification of a confidential source of information.

June 29, 1977

Mr. J. Edgar Hoover, Director
Federal Bureau of Investigation
Washington, D.C. 20535

Dear Sir:

Reference is made to your letter of June 27, 1977, regarding the above captioned matter. The Bureau is currently reviewing the information provided to it and will advise you of the results of its review.

Sincerely,

Special Agent in Charge

(S)

Very truly yours,

CONFIDENTIAL

MINUTES OF MEETING OF THE SCIENTIFIC AND STATISTICAL COMMITTEE
OF THE NORTH PACIFIC FISHERY MANAGEMENT COUNCILJune 15-16, 1977
Juneau, Alaska

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met in Juneau, Alaska, on June 15 and 16 with the drafting teams of the Tanner Crab and Gulf of Alaska Trawl Management Plans. All members of the Committee were present for the session, which was concerned with a critical review of the two plans.

The Committee identified need for further comment and discussion concerning the rationale and supporting scientific data associated with Tanner crab regulations dealing with, inter alia: (1) pot limits, (2) exclusive registration areas, (3) seasonal closures, (4) the optimum yield (OY) established for opilio and bairdi in the Bering Sea, (5) size limits, and (6) harvest guidelines. The Committee, in addition, commented on the adequacy of the plan as it related to statistical reporting requirements, documentation of its conclusions, new research direction, and cost of management. A number of editorial reviews were identified, and each member of the Committee was requested to submit written statements to assist the drafting team in making change for errors of this character.

As regards to the trawl plan, the SSC asked for further clarification of (1) methods of calculating equilibrium yield (EY) and its relationship to the allowable biological catch (ABC); (2) the nature of the options presented in the

plan; (3) the need to address questions of consumer interests; (4) domestic allowable harvest (DAH) calculations; (5) the inclusion of joint enterprise activities in the plan; (6) methods of handling latent fisheries development; (7) research needs; and (8) the potential requirement to establish a minimum size limit.

Comments on Tanner Crab Plan

1. The Committee noted that the exclusive area registration used in certain management areas might be in conflict with the fourth National Standard inasmuch as it may tend to discriminate, if not in form, in substance, against certain elements of the fleet. The Committee, however, did not feel competent to decide this issue, and hence raises the matter as one of potential legal concern.

2. Several members of the Committee noted that pot limitations imposed in several areas were of limited use in achieving conservation goals and perhaps discriminated against certain vessel classes. The Committee noted, however, that the area of concern associated with directed pot limits was totally within the jurisdiction of the State of Alaska and hence did not apply to the area under the Council's jurisdiction. The areas of "nondirected" pot limits may raise legal questions which should be addressed by the Council as regards their adherence to the National Standards. The SSC did not feel that pot limits set within State waters would distract from conservation and/or OY goals established for

regulating within the 200-mile zone.

3. The SSC supported, in principle, the concept of seasonal closures to minimize dead loss. Dead loss as used by the Committee was concerned with the aggregate of mortalities imposed by handling and releasing, as well as carrying crabs to ports of delivery. The SSC, however, felt that adequate data was not available in the plan nor referenced to allow it to pass judgement on proposed closure dates. The Committee requested that tabular data showing shell condition and dead loss estimates by months for all areas, where such information was available, be prepared and submitted to the Council at its June meeting. It was also recommended that factors influencing dead loss be studied and quantified. The Committee also noted that, although dead loss rates may differ between the United States and Japanese fleets, where closure dates for Tanner crabs are established for "condition" factors, they should apply when practical to both domestic and foreign fleets.

4. In the absence of specific instructions from the Council regarding goals and/or objectives of an OY-nature concerned with C. opilio stocks in the Bering Sea and supporting justification in the plan, the SSC was not in a position to evaluate or recommend a specific departure from the ABC for socioeconomic or ecological purposes. The Committee noted in the preliminary management plan that the OY was set taking into account historical catch trends, the uncertainty regarding the impact of an expanding foreign fishery on U.S. markets, and on potential ecological interactions. The Council may wish to reconsider these factors in establishing

an OY for 1978.

5. The Committee noted that the OY for C. bairdi was set taking into account density profiles and market values for the U.S. fleet. Increased demand and product value, however, may by 1978 render the analysis "out of date." The Council may wish to adjust the OY upwards to a DAH to accommodate changes in the economic capability of the U.S. fleet to harvest at lower density levels (e.g., 29-35 thousand tons).

6. The size limit proposed by the drafting team for C. bairdi is 140 mm (5.5 inches) except for Prince William Sound where 135 mm (5.3 inches) was recommended. The limit has been suggested in order to provide a high degree of protection for mature males in order to insure maximum fertilization of the female population. The drafting team noted that the size limit constituted a conservative approach which was consistent with management practices in Alaska, particularly when the vital biological rates of the animal being regulated and dynamics of the populations were uncertain. The 140 mm size limit would protect almost 100% of the immature and newly matured crabs as well as about 30% of the previously matured males.

7. It was noted, however, that recent data submitted by NMFS on maturation, growth, and yield per recruit provides additional information which should be considered in determining size limits for C. bairdi. This document suggests that under current harvest strategies the harvest

potential could be substantially increased by lowering the size limit to between 102 and 120 mm. The increase in yield (assuming the parameters used in the NMFS model were reasonable) obtained by such a reduction in size limit would be greater than 50%. The consequence in terms of loss of mature males between 120 and 140 mm might be about 40% of the population of this group.

8. The SSC could not come to a consensus view regarding the potential degree of risk or the loss associated with the two methods of setting size limits. Although no consensus could be reached as regards a specific size limit, the group did feel that the size limit for the 1978 season should not be set below 5 inches (127 mm), and all concerned agreed that a reduction to 5.3 inches (135 mm) was unlikely to harm the reproductive capacity of the stocks.

9. The SSC noted that harvest guidelines were "guidelines" and should not be perceived as quotas but as operational ranges available to management during a particular season.

Comments on Gulf of Alaska Trawl Plan

1. The SSC questioned the drafting team concerning the use of EY and ABC. There was some feeling that the introduction of the EY concept into the plan was unnecessary and matters associated with year-to-year variation in recruitment and population size could be adjusted for under ABC. The Committee, however, concluded that the EY information should remain as it provides useful information to follow

the basis for establishing the ABC.

2. The Committee felt that the options presented in the plan as extremes were perhaps not really extremes at all but did require the Council to make a choice in favor of one fishery vis-a-vis another. In this sense, the SSC felt that there were intermediate options that would allow for effective growth and development of trawl fisheries to occur while minimizing its impact on halibut or other nontarget species. The Committee requested that the management team consider revision of the plans to achieve this goal, but suggested that such revision await comment on the part of the Council.

3. The Committee noted that the plan did not include any information dealing with the issue of consumer interests. The management team, however, informed the Committee that such information was being prepared and would be incorporated into the next version of the draft plan.

4. There was some concern regarding methods of estimating DAH. However, in general, the SSC was satisfied that the drafting team had used the best information available, which was largely submitted by industry. It was important to the Committee, however, that in selecting options some mechanisms be considered for adjusting within season to unexpected growth patterns or failure to produce on the part of U.S. industry.

5. The Committee quizzed the drafting team on the inclusion of the joint Korean enterprise as a part of the U.S. production plans. It felt that the issue, however, was not of a technical character and must be resolved by the Council.

6. The Committee noted that at the present time the plan failed to incorporate research needs and the management plan team leader promised to incorporate such requirements in the next draft.

7. The SSC proposed to the management team that it seemed desirable to establish a minimum mesh size limit for the trawl fisheries operating in the Gulf even though a great deal of information is not yet available concerning mesh selectivity for the target species. It was noted, nevertheless, that U.S. trawl surveys employing 3" mesh sizes showed it was normally adequate for harvesting the species complex of the area. The drafting team was requested to examine historical mesh size data on perch and other species and determine whether or not a mesh limitation would be desirable for the Gulf trawl plan.

8. The SSC generally felt that Option I.B.2 was preferred in combination with Option III.C. It felt it did not want to comment on the options concerning priorities between species, and as noted above, tended to lead to a polarized situation and hence preferred something of an intermediate character.

General Comments

There was a feeling on the part of the members that both plans in some ways failed to provide the information and/or reference material upon which to make independent judgements concerning the various proposed strategies. It was also pointed out that in the Tanner crab plan there was inadequate identification of statistical and research needs. These deficiencies should be corrected in the final plan. The trawl plan also should have a section dealing with research needs. The Tanner crab plan also failed to identify management costs and projected revenues as required by legislation. Both plans appear to be somewhat disaggregated but the problem appears to be with the outline prepared by the drafting committee--a matter that should be corrected by the SSC in future plan development.

Minutes of Meeting of the SSC (NPFMC)

Anchorage, Alaska, June 22, 1977

The Scientific and Statistical Committee of the North Pacific Fishery Management Council met in Anchorage, Alaska, on June 22, 1977. Chairman Alverson convened the meeting at 7:05p.m. Present were all members except Miles, Rogers, Rosenberg, and Bevan. Main items of discussion included the (1) Statement of the SSC to the Council regarding the Tanner and trawl management plans, (2) a review of the report prepared by the Working Group concerned with renegotiation of INPFC, (3) research proposals, and a brief report and discussion of (4) the Houston OY Workshop, as per Dr. Alverson's memo of June 17, 1977 - Agenda, attached.

Revised minutes of the Juneau meeting were distributed to SSC members (they were nearly identical to those distributed at Juneau, but with the addition of discussions, etc. regarding the trawl plan). The minutes were reviewed by the SSC and accepted with minor editing changes. The SSC requested that an additional comment should be inserted in the minutes--to be effect that supporting data for trawl area/time closures to protect halibut was needed in the draft plan. Mr. Larkins reported that such data had been requested from the IPHC. He added that the IPHC would provide as much quantitative data as feasible.

Some discussion followed on the need for socio-economic data in both plans, and the dearth of such data, especially on employment. It was thought that there probable are no such data available.

Some discussion also ensued on the comments of some members that supporting data and/or references for management measures was not adequate in either plan. The Committee felt that effective and rational management measures should not always be expected to be rigidly supported by documentations, at least in the text of management plans. Some judgements will have to be based on general statements, and the best judgement of responsible managers at least until data are obtained or improved upon.

The SSC next considered five research proposals which were distributed: These were:

1. ADF&G proposal for increasing the accuracy of forecast and evaluating optimum escapement for Bristol Bay sockeye, \$1000,000 (first year of three) Info Paper 20.
2. FRI proposal for investigations on continental origin of sockeye and coho salmon in the area of the Japanese land-based fishery, \$44,500: Info paper 21.
3. U. of Washington proposal for scientific coordination for fisheries in the North Pacific, \$54,586, Info paper 22.
4. Groundfish management team proposal -- Domestic observer program (domestic trawl fishery), \$146,220, Info Paper 23.
5. ADF&G Proposal for development and enhancement of a fisheries information system, \$124,000 (first year), Info paper 25.

Frank Fukuhara summarized the Proposal (2) above; Alverson, proposal (3); Larkins, proposal (4) and Pennoyer, proposals (1) and (5).

Dr. Alverson suggested that criteria should be developed on which to judge the proposals, now and in future. General agreement was expressed that Council-supported research should be responsive to Council needs, timely, and should be prioritized. Such proposals should also be clearly necessary for management plan development, short term, and identified with ongoing Plan Development.

It was decided to hold proposal (1) in abeyance until next year, pending what action will need to be taken re high seas salmon fishing. Mr. Branson then announced that about \$257,000 of programmatic funds were available for plan development and he would like to commit the funds soon, if possible. Dr. Alverson suggested that three of the five proposals should receive priority treatment in these or other funds; in order of priority: Proposal (5), (2), and (4). These total about \$315,000, first year. The SSC generally agreed without dissent on this course of action and priorities. It was thought that Proposal (3) could be funded from other sources readily enough so it was not further considered. Proposal (4) was thought to be meritorious but received third priority mainly because of the uncertainty now of what kind or amount of trawl fishery might develop in the next 12-18 months.

A software system as envisaged in Proposal (5) was thought highly important in immediate plan development and implementation so it received first priority.

THE SSC then received a brief summary of the main thoughts in the INPFC renegotiation Proposal (Information Paper 26) by Pennoyer. The three recommendations (P. 3 of the draft) contained the essence of the proposal. The SSC endorsed the draft report.

Last, some general comments on the Houston OY Workshop were made by Dr. Alverson and Mr. Collinsworth, who attended it. A final report on the meeting is forth coming. The Workshop was thought to have brought out some very useful conceptual and also practical ideas concerning OY: especially that thought that OY is an evolving concept for a holistic approach to fisheries management, and that its interpretation will probably have to be non-universal; each Council with special problems will apply different as well as similar criteria and/or modifiers to OY.

A collection of SSC member comments on the draft plans was distributed; also information Paper 27--A completion report (period July 1, 1973-June 30, 1976) on P.L. 88-309 funded Kodiak Alaska Tanner Crab research, by William Donaldson, ADF&G.

Dr. Alverson adjourned the meeting at about 9:00pm.