

NEWSLETTER NO. 5 OF THE ALASKA CHAPTER
OF THE
AMERICAN STATISTICAL ASSOCIATION

Our upcoming meeting is to be held in conjunction with the Alaska Chapter of the American Fisheries Society (AFS) the week of November 14-18 in Soldotna. A schedule of our sessions and those of AFS are listed below. Abstracts for the Fisheries statistics session are also included. Round trip air fare between Anchorage and Soldotna runs about \$60 and may be arranged through several carriers including: Alaska Aeronautical Industries (243-4329), North Pacific Airlines (248-2003), and South Central Air, Inc. (243-8791). Make your hotel reservations soon, accommodations are available in both Soldotna and Kenai. Some possibilities are:

Harbor View Hotel (283-4133) Kenai
International Hotel (262-4451) Soldotna
Katmai Motel (283-4846) Kenai
Kenai River Lodge (262-4292) Soldotna
Kenai Spur Motel (262-4292) Kenai
Soldotna Inn (262-9169) Soldotna
Sheffield Kenai Willow (283-7566) Kenai.

Steve Thompson has recently released the following "amazing" statistics for the Alaska Chapter of ASA membership:

Academic - Faculty	12	29%
Students	4	10%
Federal	6	15%
State	16	39%
Private - Consulting	3	7%
TOTAL	41	

These figures may be misleading since only 34 of 41 have paid 1983 dues. That was a small hint for those that haven't paid yet.

Other items of interest:

The Committee of Institutional Cooperation (CIC) has fellowships for minorities in the sciences; for more information write:

CIC Minorities Fellowship Program
Kirkwood Hall 111
Bloomington, Indiana 47405

The application deadline is January 15, 1984 for academic year 1984-85.

NEWSLETTER NO. 5
Page 2

The International Symposium on Circumpolar Health will be held in Anchorage May 13-18, 1984. Abstracts are due very soon. For more information contact David Hall or write:

Conferences and Institutes (474-7800)
117 Eielson Bldg.
403 Salcha Street
Fairbanks, AK 99701

An informal book review session will be held all day Monday, Nov. 14 at our meetings. Dana Thomas picked up book catalogs from most of the publishers of statistical literature at the national meetings in August. These will be available for your review. Dana, Bob Sutherland, and others will bring books they have recently purchased that may be of interest to our members; you are invited to do the same.

10-10-83

ANNOUNCEMENT

of a

Meeting of the Alaska Chapter

of the

American Statistical Association

Monday and Tuesday, November 14-15, 1983 in Soldotna

Schedule All meetings will be held at the International Hotel except as noted.

Monday

9:00 a.m. Leone/Brundage radio interview tape.

9:35 a.m. Business meeting (nomination of 1984 officers). If time permits, discussions of new statistics books.

11:00 a.m. Revolving spotlight - a chance for everyone to briefly describe a current project.

Noon Lunch - \$6.75/person - International Hotel.

1:30 p.m. Log Linear Model Session, Dana Thomas - Chair (Each speaker has approximately 1 hour.) Hollis Fishelson-Holstine, General Methodology Suzanne Miller, Software Available David Hall, The Abuse of Log Linear Models

6:00 p.m. Seafood Buffet and Beer at the Central Peninsula Sports Center Conference Room.

Tuesday

9:20 a.m. Joint Session with AFS on Fisheries Statistics Kit Rawson - Chair (Central Peninsula Sports Conference Room) The order of presentations is unknown at time of printing. Abstracts attached.

Steve Thompson - Evaluation and Management of Fluctuating Fisheries

Hal Geiger - Nonsampling Errors in Coded Wire Tagging Studies of Salmon

R. Fagen - Exploring Fisheries Data

Noon Lunch is on your own.

1:30 p.m. Election of 1984 officers followed immediately by the ASA film, Mathematical Probability and Statistical Inference. Some Recollections from an Important Phase of Scientific Development. Harold Cramer, 1980. 75 minutes.

Steve Thompson
Alaska Department of Fish and Game
Kodiak

Title: Evaluation and management of fluctuating fisheries

Abstract: Many fish and shellfish stocks exhibit wide fluctuations in abundance whether harvesting occurs or not. Some of these fluctuations can be associated with changes in environmental conditions or community structure. For example, statistical analysis of Kodiak District shrimp survey and commercial catch data shows declines in shrimp to be significantly related to increases in predator abundances and rising ocean temperatures. Simultaneously, commercial exploitation rate also has a significant effect on shrimp increases or decreases. Since the effect of fishing depends on the changing environmental conditions, and since stocks can be expected to fluctuate regardless of the harvesting strategy employed, the question is what harvesting strategy will produce the highest accumulative yield from a fluctuating stock over a number of years. When a variety of harvesting strategies are compared through simulation, it is found that highest yields are obtained with strategies that respond to changing conditions.

NONSAMPLING ERRORS IN CODED WIRE
TAGGING STUDIES OF SALMON

Hal Geiger

The Pacific Marine Fisheries Commission coordinates coded wire tagging studies of salmon and steelhead on the west coast of the U.S. and Canada. Member agencies implant a small piece of stainless steel wire with a binary code scratched in the surface, and mark the fish by removing the adipose fin. The fishery is later sampled for fish with missing adipose fins. The heads of marked fish are recovered, the tags are decoded, and the information is turned over to the Pacific Marine Fisheries Commission.

Estimates based on tagging studies may contain errors from several sources. Errors can be introduced during implantation, sampling or decoding of the tags. Other errors are introduced with the assumptions used in the statistical treatment. I discuss some of these errors and speculate on their effect on estimates.

EXPLORING FISHERIES DATA. R. FAGEN. School of Fisheries and Science, University of Alaska, Juneau.

Exploratory data analysis (EDA) is a way to detect patterns in data. It precedes and complements confirmatory statistical techniques, such as regression, that serve to test a particular hypothesis at a preassigned level of significance. Systematic examination of data using EDA can disclose unexpected relationships and suggest new hypotheses. In fisheries research, as elsewhere, data sets may be large and heterogeneous, will contain statistical outliers, and can not be trusted to satisfy the sampling and distributional assumptions of classical confirmatory statistics. Thus an EDA approach can be especially sturdy and informative. This talk will illustrate applications of EDA to data from Alaskan fisheries. Advantages of EDA as well as some important cautions and limitations will be discussed.

TENTATIVE PROGRAM SCHEDULE

Page 2

Monday, November 14

Arrive Soldotna

6:00 PM Seafood Buffet & Beer at the Central Peninsula Sports Center Conference Room. Registration.

Tuesday, November 15

(Central Peninsula Sports Center Conference Room)

8:20 Welcome: Bill Heard, Alaska Chapter President

8:30 Janice Hughes, President, American Fisheries Society

8:40 Keynote Address: George Snyder, Director Auke Bay Laboratory, Juneau

9:20 -- 10:20 Panel: FISHERIES STATISTICS
Panel Chair: Kit Rawson, ADF&G
FRED, Anchorage

10:40 -- 12:00 Panel: POPULATION DYNAMICS
Panel Chair: Robert Fagen, UA,
Juneau

1:20 -- 3:00 Panel: ENHANCEMENT TECHNIQS
Panel Chair: John McMullen, ADF&G
FRED, Juneau

3:20 -- 5:00 Panel: IMPACTS OF MEGA HATCHERIES
Panel Chair: Brian Allee, PWSAC,
Cordova

7:30p.m.--9:30p.m. AQUACULTURE ROUND TABLE DISCUSSIONS
(International Hotel Meeting Room)
Discussion Chair: Bruce Bochen, NSRAA,
Sitka

Wednesday, November 16

(Central Peninsula Sports Center)

8:20 -- 10:00 Panel: INTERACTIONS AMONG FISHERIES HYDROLOGY & HYDRAULICS Panel Chair: Jack Orsborn, WSU, Pullman, Washington

10:20 -- 11:40 Panel: FISHERIES HABITAT INTERACTIONS
Panel Chair: Christopher Estes, ADF&G
Su Hydro, Anchorage

1:00 -- 3:20 Panel: INTERNATIONAL FISHERIES ISSUES
Panel Chair: Steve Pennoyer, ADF&G CP,
Juneau

3:20 -- 4:00 Panel: MICROCOMPUTER USE IN FISHERIES
Panel Chair: Gary Freitag, SSRAA,
Ketchikan

4:00 -- Business Meeting

7:00 -- 8:00 No Host Bar, Central Peninsula Sports Center

8:00 -- Annual Banquet
Raffle

Thursday, November 16

8:20 --10:00 Panel: FISHERIES BIOLOGY & BEHAVIOR
Panel Chair: A.J. Paul, UA IMS
Seward

10:20-- 12:20 Panel: LOGGING MITIGATION

12:20 Closing Remarks