

Penn State Researchers Go Fishing for Science

Insights into heart attack, stroke, bone diseases, malnutrition, and aging may be in the catch taken by Penn State researchers bound for a fishing expedition in the ice-blue waters off the British Columbia coast.

Dr. Stuart Patton, Evan Pugh Professor of Agriculture; Dr. Richard L. McCarl, professor of biochemistry; Dr. Harald Schraer, professor of biophysics, and Dr. Rosemary Schraer, associate professor of biochemistry, will be fishing for facts aboard the research vessel, Alpha Helix.

What they will be seeking, specifically, are clues to the mysterious changes that take place in the Pacific salmon, a fish that ages the equivalent of 20 to 40 man-years in the three to four weeks it takes to leave the ocean and spawn in the fresh waters of its birth.

Dr. Patton, a biochemist from the Division of Food Sciences, says that the salmon's rapid aging provides an excellent model for a host of problems that plague man. For example, salmon do not eat during the entire spawning period and, instead, use up deposits of fat. One such deposit was discovered in the salmon heart muscle by Patton and a colleague during a previous expedition.

During the spawning period, Dr. Patton explains, the salmon could be said to be suffering from the exact opposite of atherosclerosis where fats accumulate in the blood vessels, eventually clog them, and lead to stroke or heart attack. He believes that further study of the ways in which the fish uses its stored fats may tell us something about how to save ourselves from heart disease.

During the trip, Patton will try to discover how important the fat deposits are to the salmon heart beating mechanism.

Dr. Richard McCarl will also be studying the salmon's heart, but with a view to learning more about the aging process. A specialist in energy use in heart cells, McCarl has for years studied the aging process in isolated rat heart cells which he has been able to keep beating in the laboratory for up to six weeks. He and his co-workers have found that the hormone cortisol will reverse many of the changes observed as the cells age and will reinitiate cell beating when it stops as the result of aging.

McCarl will conduct metabolism studies of salmon heart cells while on the Alpha Helix.

Husband and wife researchers, Harald and Rosemary Schraer will be focusing, among other things, on the

changes that occur in the salmon during its movement from salt to fresh water.

Dr. Harald Schraer expects to spend part of his time on board the Alpha Helix preparing material for examination with the electron microscope. He wants to see if there is a difference in the ultrastructure of the salmon heart muscle and bone before and after spawning.

A cell biologist interested in the movement of calcium, he will also work with other scientists on board who will be studying calcium metabolism. Dr. Schraer hopes to compare bone samples from the salmon to see if the grotesque changes in the fish's skeleton could be the result of demineralization when the animals move from salt to fresh water.

Dr. Rosemary Schraer will be analyzing the salmon's blood to see if the change from sea to fresh water affects an enzyme (carbonic anhydrase) that helps to control the acid-base balance in the animal. She has previously studied the substance in birds, who are near relatives of fish, and found that the enzyme is a possible target for the harmful action of DDT in certain species that appear to be affected by the pesticide.

Drs. Patton and McCarl will join the expedition on Aug. 31. Drs. Harald and Rosemary Schraer will catch up sometime after Labor Day. All will return on or about Sept. 19.

The Alpha Helix, a 133-ft. ship especially fitted with biochemistry and physiology laboratories, is supported by the National Science Foundation and operated by Scripps Institution of Oceanography of the University of California, San Diego. The expedition is being led by Dr. Andrew Benson of Scripps.

Pork Leader Discusses Problem

The most serious problems which plagued the industry last year, Cooper found there were some things to be proud of, especially in regard to control of hog diseases. He said the federal government will probably declare the American pork producing industry "cholera free" by spring 1975, due in large part to dedicated industry efforts. Progress was also made toward eliminating other diseases such as trichinosis, brucellosis and tuberculosis.

Cooper, a pork producer from Lambert, Miss., is in Seattle to attend the 52nd Annual Meeting of the Meat Board, where P.I.G. held its annual business session on August 19.

"To say the least, everyone in the hog production business over the past year has learned a few lessons. For some, these lessons cost them their livelihood and their hog enterprise. Today's pork producer just has to be a better manager in order to survive," said Cooper.

He said not selling the hogs when they reach market weight only increases the supply of pork, further depressing the market.

Despite the problems

Man-Power In Supermarkets
The male shopper, though in the minority, more often than not is the primary shopper for his household, according to a recent survey. On the average he is a 43.7 year old high school graduate with a family income of \$12,285 per year and he makes 2.3 shopping trips a week for his family of 3.2 persons.

Cooper pledged that the Pork Industry Group would continue to work on promoting pork and the pork industry, gaining greater acceptance among consumers. He also cited the special promotion work now being done to encourage foodservice operators to add pork to their menus.

PUBLIC AUCTION

For the Heirs of Jennie N. Gustafson, 333 acre farm, located on Quaker Neck Road, Route 289, just past the Chester River Yacht & Country Club, 2 miles South of Chestertown, Md.

SATURDAY, SEPTEMBER 14, 1974

At 1:00 P.M.

**REAL ESTATE:
333 ACRE DAIRY FARM**

333 Acres with about 275 tillable. Approx. 6500' road frontage. Improved by frame house, 8 rooms & bath, central H/W heat 28 stall dairy barn, concrete paved area and large loading shed, 2-12x40' silos w/roofs, chicken house, Metal grain storage and corn cribs. Ideal for grain farming, dairy farming and hunting. "A fine farm with future potential"

TERMS: 10% deposit, settlement within 60 days, possession by Jan. 1, 1975. Sale subject to confirmation by Heirs. Information and plot plan available from: HARRY RUDNICK & SONS, INC., Auctioneers Galena, Md. Phone [301] 648-5100

CONSIGNMENT SALE

**WEDNESDAY, SEPTEMBER 4
9:30 A.M.**

Location: 1/2 mile north of Route 23 on North Maple Ave. in Leola, Lancaster Co. Pa.

Melrose Bobcat; New Lumber 2x4's and 2x6's; trailer load Plywood, Paneling, Peg Board, Homesote, Asbestos Board, etc. etc. Tractors, Farm Machinery, Horse Drawn Implements, New Tools. We have buyers for hay and straw.

We sell on Commission.

DAVID H. GOOD
717-656-9024

F. Snyder, R. Martin, C. H. Wolgemuth, Auct.
Next Sale Wednesday, October 2
NOT RESPONSIBLE FOR ACCIDENTS.



Some people believe that if a baby looks in the mirror before it is a year old, it will become cross-eyed.

PUBLIC SALE

DAIRY COWS & FARM MACHINERY

FRIDAY, SEPTEMBER 13, 1974

12 o'clock Noon

Located 3 miles West of Buck off of Route #372, turn left on to Susquehannock Road, Martic Twp., Lanc. Co., Pa.

50 HEAD DAIRY COWS

31 Head Milk Cows all Holsteins except one Guernsey. Some fresh and some springers and all stages of production.

28 Head Holstein Heifers

6 to freshen soon
22 bred & open heifers

30 day health chart with each animal. All cattle checked for pregnancy by vet. This is a good young herd of 2nd & 3rd calf cows

500 gal Esco vacuum milk tank Walker Stamp, milk transfer system, 3 Surge milking units, 52 gal. electric hot water heater.

Farm machinery consists of T9 International N crawler tractor with front end loader, New Idea manure spreader with P.T.O., J.D. chuck wagon, N.H. flail chopper, Kasten forage box wagon, Kasten plow rake for 5 bottom plow, flat wagon, rubber tired wheel barrow, 20 Ton feed bin, 2 wagon loads of hay, lot of small articles 1969 Ford 2 door Galaxie car (No 302 motor - cheap to run)

Sale by

ABRAM W. METZLER

Lunch Available

Kersey A. Bradley, Auct.
Kirk & Bradley, Clerks

PUBLIC AUCTION

OF 118-ACRE DAIRY FARM

SATURDAY, SEPTEMBER 7, 1974

AT 2:00 P.M.

Location: 5 miles East of Pine Grove along Sweet Arrow Lake Road. Take Route 125 North from Pine Grove to Sweet Arrow Lake Road turn right 5 miles to Farm, in Village of Roedersville, Washington Township, Schuylkill County, Pennsylvania.

118-ACRE DAIRY FARM

Approximately 78 Acres Tillable, 10 Acres Pasture, 30 Acres Woodland Thereon erected a

2 1/2-STORY FRAME HOME

Containing on First Floor, Large Eat-in Kitchen with lots of Cabinet Space and Built-in Range, Dining Room, Living Room. Second Floor contains 4 Bedrooms and Full Bath. Third Floor, Storage Basement contains Laundry Room, 1/2 Bath, Furnace Room, Cold Cellar. Coal Stoker Hot Water Heat with Summer-Winter Hookup 2-STORY SUMMER HOUSE

LARGE FRAME BANK BARN with 34 Stanchions, Tile Trough, 2 Heifer Pens, Patz Barn Cleaner

BLOCK MILKHOUSE with 500-Gallon Zero Milk Tank, Sputnik Milk Transporter, Automatic Washer and 52 Gallon Electric Water Heater, Universal Vacuum Pump

16'x52' Star Silo with Badger Unloader

44'x60' Cement Block Implement Shed

2 Small Buildings for Heifers or Calves, 4'x48' Corn Barn

1-CAR GARAGE

Lot of Old Shade Well with Myers Pressure System, Stream, 200 Amp Service to Farm All buildings are in excellent condition This is a very well kept Farm A level Farm with Soil in high state of cultivation

Sale time: 2:00 P.M. Sale by

LESTER S. and DORIS E. MARTIN

R.D.2, Pine Grove, Pa. - 717-345-3889

Richard A. Adams, Attorney

John E. and Paul E. Martin, Auctioneers

717-733-3511 - 733-3305 - R.D.1, Ephrata, Pa.

NOTE Inspection of House by appointment or from 12:00 Noon to 4:00 P.M. Saturday, August 31 1974 Inspection of balance of farm anytime For appointment call 717-345-3889.

J. H. BROUGHER

HOLSTEIN MILKING HERD

DISPERSAL

THURSDAY, SEPT. 5, 1974

11:00 A.M.

Located in Cumberland County, 7 miles West of Carlisle, Pa., or 3 miles East of Newville, Pa., just South off Route 641, on Goodyear Road, opposite Blosserville Road.

59 HOLSTEIN COWS

**6 REGISTERED — 53 GRADES
BANGS AND T.B. TESTS WITHIN 30 DAYS OF SALE**

Only a few over 6 years of age — majority are 3 and 4 yr. olds. 1-3 the herd fresh between June and sale day. A good number bred for November and December. Balance are bred to freshen thru the year.

Majority are by Curtiss sires including Astronaut, Chief, Forty-Niner, Arlinda Chief Royal, President King, etc.

This is a real good herd to choose from, with size and good udders.

LUNCH TENT FOLDERS

J. H. BROUGHER, Owner

R.D.4, Carlisle, PA 17013

Terms: Cash

Not Responsible for Accidents

RALPH HORST, Auct.

FRED NAUGLE, Announcements