



Poachers on the reservation

The foot of this red fox was badly mangled when it was caught in an illegally-set steel trap on the Oak Ridge reservation. In addition to crippling animals, traps like this pose potential danger to Nuclear Division employees involved in forest management or conducting field research. Poachers should beware that trespassing on government property is a federal offense. Persons caught trapping or hunting on the reservation are also subject to prosecution by the Tennessee Wildlife Resources Agency.

WATtec '78 set February 23-25

WATtec-78, the fifth annual energy conference and exhibition held during Engineers' Week in Knoxville, Tenn., is scheduled February 23-25, at the Hyatt Regency Knoxville. Last year Nuclear Division employees from all four plants participated in conference activities.

"Energy in the Tennessee Valley Region" will be the theme of the interdisciplinary program, sponsored by 24 local sections of technical and professional societies in energy-related fields.

The 1978 sessions will feature plenary presentations by nationally prominent energy leaders, specialty sessions organized by the sponsoring societies, and an exhibition of energy-industry products and services.

The Public Awareness Symposium, a feature of the last two WATtec conferences, is planned Saturday, February 25. The day-long program, expanding on the conference theme, will be directed toward business and professional leaders, legislators and public officials in the Tennessee Valley region.

General chairman for WATtec-78 is George R. Jasny, director of engineering for the Nuclear Division.

Inquiries concerning the 1978 conference and exhibition should be addressed to: WATtec, P.O. Box 629, Oak Ridge.

in this issue...

Bill Henry, 24-year Carbide veteran, fashions a piggin during his coopering apprenticeship with Alex Cooper from Hancock County. (See story on page 4.)

Other features include:

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- Centrifuge appointmentpage 3
- Rotary dissolverpage 5
- Dr. Lincolnpage 7



question box

If you have questions on company policy, write the Editor, Nuclear Division News (or telephone your question in, either to the editor, or to your plant contact). Space limitations may require some editing, but pertinent subject matter will not be omitted. Your name will not be used, and you will be given a personal answer if you so desire.

Bond mailings

QUESTION: Why are U.S. Savings Bonds mailed to employees in separate envelopes? I am currently purchasing one a week, and with the way the mail is these days, some of my bonds have been delivered to other people. It seems that they could be accumulated and mailed out at regular intervals.

ANSWER: The printing and preparation for mailing of bonds is highly mechanized. Each bond is inserted into an envelope by a high-speed inserting machine. If an individual is buying more than one bond per month, it would be more costly to try to remove the bonds from their individual envelopes in order to put them all in one envelope. Even though each bond is mailed in its own envelope, all bonds are mailed at the same time each month, usually around the 5th. Employees may authorize the Company to hold their bonds in safekeeping. If this is done, they are dispersed only upon the employee's request.

Safety meeting topics

QUESTION: It has always been my impression that safety meetings were to impress upon employees the need for safety, both inside and outside the plant. Recent meetings conducted by a woman have caused a great deal of discussion. It is my opinion that her program was in very bad taste. She made many statements regarding how people should behave off the job and even with whom they should associate. Who was responsible for her tasteless program?

ANSWER: Safety, health, fire prevention and security program requirements are derived from legal statutes, corporate policy and genuine concern for the welfare of the individual employee. Since these programs are related in many ways, their various aspects are communicated to employees at routine safety meetings. Staff members, specialized in the disciplines involved, participate in presenting information at such meetings. Every effort is made to assure that this information is constructive, informative and factual.

If an incorrect statement is made at any particular meeting, it is promptly refuted. When such a statement was brought to the attention of appropriate staff members a few months ago, it was refuted in writing, and the error brought to the attention of all persons involved.

Paducah overtime

QUESTION: I am concerned about the practice regarding required overtime for exempt employees at PGDP. I am not talking about a couple of hours here or there. Instead, I refer to working full weekends, covering double or triple shifts, and sometimes even working 24 hours continuously.

Our Divisional practices manual has an insert which discusses compensatory time off using such weasel words as "excessive overtime," "substantial number of days off," etc. But it clearly denies the employee time off on a day-for-day basis. I believe it is designed to demean and intimidate the employee who asks for time off after he or she has had to work weekends. Is this fair? Can't something be done to correct this practice?

ANSWER: The Paducah Plant's overtime requirements have not resulted in excessive overtime being worked by anyone to their knowledge. If you feel that you have not been treated fairly in relation to compensatory time off, you should discuss this matter with your supervisor or the Employee Relations superintendent.

You are correct in stating that the guidelines do not indicate that an individual should be given time off on a day-for-day basis. Most exempt employees' jobs involve working some overtime during the year as a basic part of the job.

(Please see page 8)

about people...



Richmond



Thomas



Compton



Chen

David G. Thomas, ORNL Engineering Technology, has been named a Fellow of the American Institute of Chemical Engineers (AIChE). He was elected in recognition of his research in the properties of fluids. Thomas is a member of the Knoxville-Oak Ridge Section of AIChE, and holds a Ph.D. in chemical engineering from Ohio State University.

Yok Chen, Solid State Division, and **Robert N. Compton**, Health and Safety Reserach Division, have been elected as fellows of the American Physical Society.

Chen, a native of China, performed his undergraduate work at the University of Wisconsin, and joined the ORNL staff shortly after receiving the Ph.D. degree in Physics from Purdue University in 1965. He was honored as a recipient of the IR-100 award in 1975, given for the development of the most significant technological products of the year.

Compton joined Union Carbide as a senior research trainee at the Y-12 plant while completing requirements to receive the Ph.D. degree from the University of Tennessee in 1965. Since then he has worked on ORGDP's Gas Centifuge Project and has spent the last eight years at ORNL in the Health Division. Compton holds membership in the American Society for Mass Spectrometry.

Chester R. Richmond, associate director for biomedical and environmental sciences at ORNL, has been appointed to Committee 2 on Internal Exposure of the International Commission on Radiological Protection. The committee provides general guidance on the use of radiation sources to the Congress of Radiology as well as others in the field of radiation protection. During his four-year term on the Committee, he will be involved in developing values for secondary limits of internal irradiation.

Richmond is a member of the International Radiation Protection Association, Sigma Xi, Society for Experimental Biology and Medicine and the American Public Health Association. He joined the Union Carbide staff in 1974.

Named to development posts



Post



Tunnell

Post, a native of Maryville, holds a B.S. degree in nuclear engineering from the University of Tennessee. He joined Union Carbide after his graduation. He and his wife, the former Paula Edmonds, live at Route 4, Claxton. They have a daughter, Claudia.

Tunnell was born in Springville, Miss., and has a B.S. in mechanical engineering from UT. He has been with Union Carbide 27 years. He and his wife, the former Winona Russell Edds, live at Route 4, Verdon Drive, Powell. They have two sons, Michael and David; and a daughter, Virginia.

David W. Post and Hilton A. Tunnell have been named group leaders in Y-12's Development Division.

Savings Plan participants

Nuclear Division employees who received a distribution check this past July from the General Savings Fund of Union Carbide will have additional income to report for the year 1977. Each employee was provided with a statement of his/her account, and it is noted that the income in column four of that form is "taxable income."

In reporting this amount of federal income tax returns, this item should be identified as "Union Carbide Corporation Savings Plan Pay-Out." Even though the space on the form is limited, it is suggested that this be reported on line 20 of Form 1040. The fact that it is income from the Carbide Savings Plan is very important. The Internal Revenue Service shares tax information with the Department of Revenue of the State of Tennessee. Designation in this manner will let the State of Tennessee know that it is *not* taxable income as far as Tennessee is concerned. To list it as interest earned or other similar earnings may result in inquiries from state tax officials.

Recent tax law changes by Internal Revenue Service

There have been many changes in the tax law affecting the filing of tax returns for 1977. Here are some questions, with answers, from the Internal Revenue Service about some of these changes:

QUESTION: I understand that if I move in 1977 I won't have to move as far to be able to claim my moving expenses. Is that true?

ANSWER: Yes. The old distance requirement of 50 miles has been reduced to 35 miles.

QUESTION: Haven't some of the maximum allowance limits been changed too?

ANSWER: Yes. You may claim up to \$3,000 for expenses involved in buying, selling, or renting a principal residence, of which no more than \$1,500 may be used for pre-move househunting and temporary living expenses. The old limits were \$2,500 and \$1,000 respectively.

QUESTION: There was a lot of talk about changing the sick pay exclusion. What's the final rule for 1977?

ANSWER: Sick pay for temporary absences from work is no longer excludable from taxable income. You must be totally and permanently disabled in order to exclude all or part of your disability income.

QUESTION: I usually itemize my deductions, but without my alimony payments I won't have enough to itemize. Won't my taxes be higher?

ANSWER: Probably not. For example, suppose you are single, make \$30,000 a year, pay alimony of \$5,000, and have other deductions of \$1,000. In the past, you could deduct the \$6,000 in itemized deductions, plus your exemption, to find your taxable income. Now, without itemizing, you can deduct your \$5,000

in alimony payments and your exemption. Since the zero bracket amount is \$2,200 (\$3,200 for marrieds filing jointly), you will end up, in effect, with a lower taxable income, and a lower tax.

Tax information mailed last week to employees

The Central Payroll Department stated that W-2's were mailed last week to all Nuclear Division employees. The forms must be filed with income tax statements. Employees who have failed to receive the form should call the Timekeeping Department in the plant in which he/she works.

QUESTION: I sold my house in 1977 and I'm over 65. Don't I get a special tax break because of my age?

ANSWER: Yes. If the home you sold had an adjusted sales price of \$35,000 or less, you pay no tax on any profit you made. Previously, the limitation was an adjusted sales price of \$20,000 or less. You can take advantage of this tax break only once in a lifetime, and this benefit applies only to the sale of a home which has been your principal residence for at least five years of the last eight years.

QUESTION: I make child support payments. How much do I now have to pay in order to claim the exemptions for my children?

ANSWER: Under the old law, you had to pay \$1,200 or more for the support of one or more children. You now have to pay \$1,200 toward the support of *each* child. This applies only if your divorce decree or agreement does not specify who is to get the exemptions, and you are the noncustodial parent.

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Frew to centrifuge post



Charles P. Frew

The appointment of Charles P. Frew as associate manager of the newly formed Operating Contractors' Project Office for the Portsmouth Gas Centrifuge Enrichment Plant has been announced by Paul R. Vanstrum, vice president for engineering and development for the Nuclear Division.

Frew, who has been an associate director of engineering for Union Carbide's Chemicals and Plastics Division at the South Charleston, W. Va. Technical Center since 1969, will report to Gordon G. Fee, the Nuclear Division's general manager for the new office. He will be responsible for managing the engineering integration, technology integration, systems engineering, and management control system activities assigned to the operating contractors.

The Project Office, which will have personnel located both in Oak Ridge and Portsmouth, Ohio, will have the lead role for managing and/or coordinating the project's requirements for technology development, design definition, systems analysis and procurement of special equipment. It will serve as the operating contractor's contact point for DOE's Oak Ridge Operations Office, which has overall responsibility for the multibillion-dollar uranium enrichment plant near Portsmouth.

Personnel from Union Carbide's Nuclear Division, Goodyear Atomic Corporation and the AiResearch Division of the Garrett Corporation will staff the new Project Office.

Frew began his career with Union Carbide in 1953 as a process engineer at the Chemicals and Plastics Division where he was named a process group leader in 1962, a position he held until 1969.

In his most recent position, Frew's responsibilities included process engineering, plant engineering and general project management.

A native of Pittsburgh, Pa., he received his bachelor's degree in chemical engineering from the University of Pittsburgh and has done graduate work at West Virginia University. He is a member of the American Institute of Chemical Engineers.

Frew and his wife, the former Penelope Prim, have two children, Kenneth and Roberta. The family plans to move to the Oak Ridge area in the near future.

Ancient auto retires also...



ANCIENT CHARIOT—Ernest L. "Cuz" Brown, recently retired ORGDP employee, is seen beside his 1946 car, which logged more than 700,000 miles. Brown has refused many offers for the relic. "It will probably outlast me," he says.

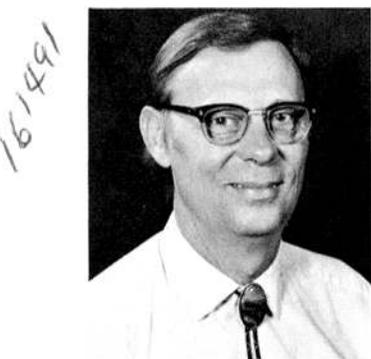
A well-known ORGDP employee, Ernest "Cuz" Brown of Friendsville, retired December 31, 1977. The retirement of "Cuz," who was classified as a firedriver, also means his equally well-known Chevrolet will no longer be making the daily trip to Oak Ridge.

"Cuz," who began work at ORGDP on April 28, 1944 as a fireman and worked in the same department since

that date, purchased his 1946 Chevy in 1952. He has travelled more than 700,000 miles during the past 26 years. The car, now on its fifth motor, made daily round-trips of 60 miles between Friendsville and ORGDP. "Cuz" also commutes each Sunday to attend church services in Oak Ridge.

"Cuz" says he wouldn't think about selling his car, adding, "it will outlast me."

Odell promoted in Biology



Odell

Theodore Odell has been named associate director of the Biology Division. Odell succeeds Stanley Carson, who retired Oct. 31 after 29 years as associate director of the division.

Odell, a physiologist, joined the Biology Division in 1952 to perform research on the hematology of blood platelets and large nucleus cells. The work began as a study of radiation effects on platelet formation. Most recently he was associate head of the division's Cancer and Toxicology Section.

He holds master's and doctoral degrees in zoology from Indiana University in Bloomington.

He is a member of the American Society of Hematology, the Radiation Research Society, the Society for Experimental Biology and Medicine, and the American Association for the Advancement of Science. He and his wife, Ann, live at 637 Pennsylvania Avenue, Oak Ridge.

Last firewood cuttings of season

The last public firewood cutting of the season will be held on January 27 and 28. Those interested in participating should meet between 8 and 9:30 a.m. in the parking lot on Bethel Valley Road, east of the main entrance to ORNL (across the street from the new Hologated Heavy Ion tower).

For more information call Dennis Bradburn at 3-1266, or the Public Relations Department, 3-6421.

Seminar to discuss energy problem

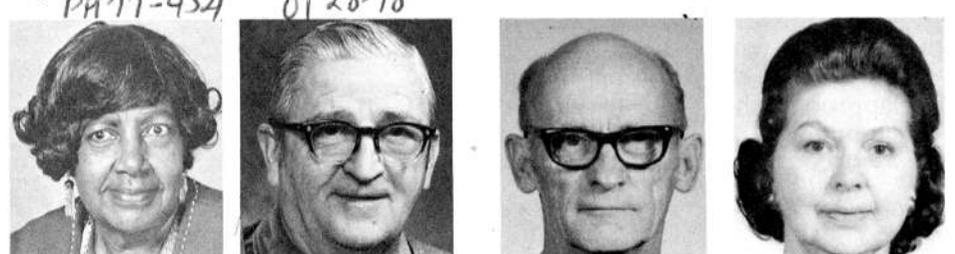
"Space Solutions to the Energy Problem" will be the topic of a seminar presented by the ORNL Engineering Division at 1:30 p.m. February 2 in the 4500-N Central Auditorium.

Dr. Bryan O'Leary, a professor at Princeton University, will be the featured speaker.

retirements...



Carl B. Longworth Plant and Equipment ORNL 16 years service
Herbert C. Dickinson Y-12 Quality Assurance 31 years service
Fred H. Marrow Y-12 Building Services 33 years service
Neil H. Hurd ORGDP Maintenance 33 years service



Mamie Williams ORGDP Maintenance 33 years service
Robert K. Branam ORNL Operations 23 years service
Virgil A. Thomas Paducah Electrical 25 years service
Rebecca E. Bugg Paducah Medical 20 years service



Alfred N. Sherron Paducah Process Maintenance 26 years service
David L. Marshall Paducah Plant Services 19 years service
Joseph A. Lovelace Paducah Power, Utilities, Chemicals 25 years service
James M. Cloyes Paducah Fabrication, Maintenance 25 years service



Alvin A. H. Plewke Paducah Electrical 25 years service
Carl C. McDowell Paducah Plant Shift Superintendents 44 years service
Joe Chambers ORGDP Maintenance 33 years service

Different drummer. . .

Lost art of coopering revived

William T. "Bill" Henry Jr., a 24-year Union Carbide veteran, participated in an apprenticeship program to revive the lost art of coopering—the practice of making wooden barrels and vessels by hand methods.

The program, sponsored by the East Tennessee Crafts Council and the Tennessee Valley Authority, is part of a move to locate masters of all-but-forgotten crafts—blacksmiths, tinsmiths, coopers, weavers, chairmakers, quilters and others—and encourage them to train younger men and women to perpetuate these skills. This younger generation will, in turn, conduct workshops, demonstrations and schools to help reestablish traditional crafts.

Henry, a chemical operator in ORNL's Operations Division and a long-time wood-worker, spent a month apprenticed to Alex Stewart, an 85-year-old native of Hancock County. During his apprenticeship, Henry lived and worked with Stewart in his home in Sneedville, about 90 miles from Oak Ridge. "Alex is a grand old gentleman and an artist in his own right," says Henry. Dr. Henry Glassie, an authority on traditional American crafts, can identify fewer than a dozen producing coopers in the United States—Stewart is one of these few.

'Coopering—the practice of making wooden barrels and vessels by hand methods.'

The East Tennessee Crafts Council is exploring the idea of establishing a full cooperage at Norris Dam State Park to provide jobs in this traditional American craft and to increase tourist interest in the park.

Henry kept a daily journal during his apprenticeship. Many entries were influenced by the weather since his "workshop" was a converted

tobacco barn, without the luxury of a heating system.

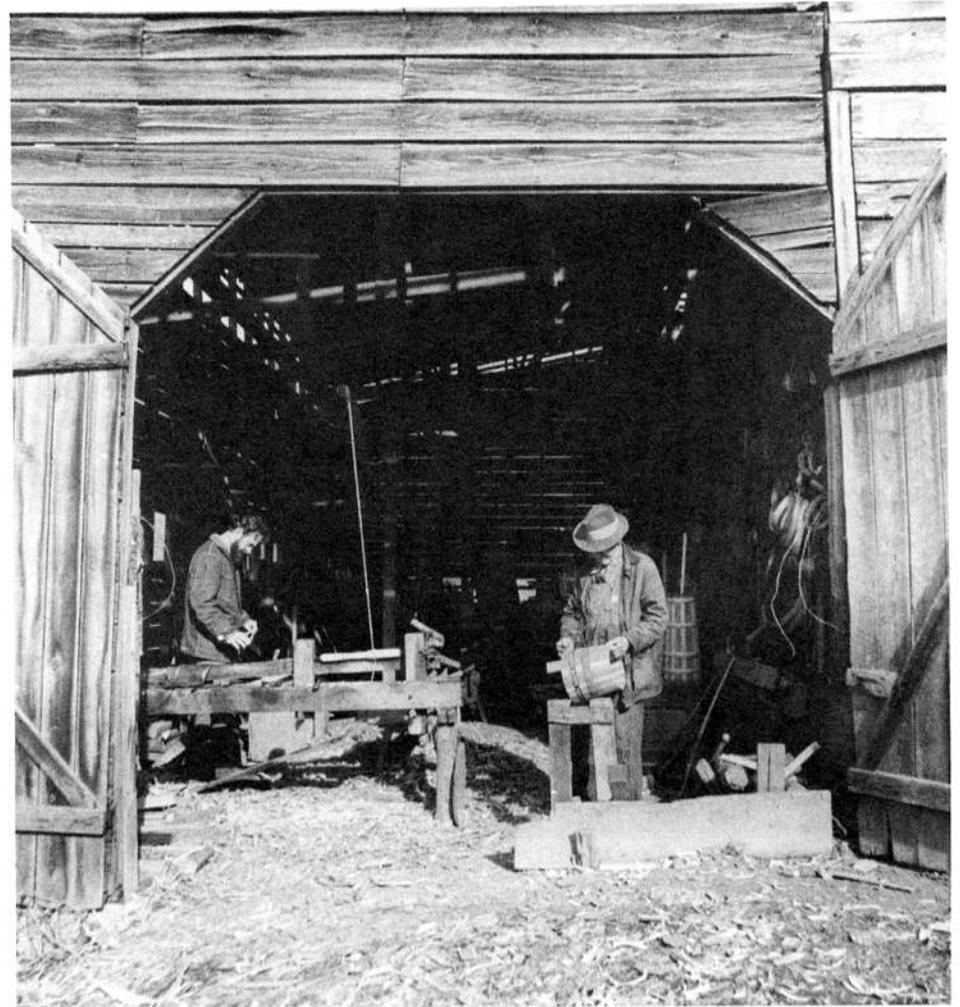
Products of his month's training included: a shaving horse and 11 vessels such as various buckets, "spooners" (spoonholders), butter churns, and piggins (pails with extended staves that can be used as handles or as wall hangers).

The vessels were fashioned with tools Stewart mainly had made himself; for instance a spring-pole lathe—which is 60 years old and foot-powered—and a "croze"—a half-circle wooden block fitted with a saw blade section, used to cut rings inside the vessels for inserting their heads. Power tools were never used.

'I left with a lump in my throat as big as two of Alex's biscuits.'

Henry said he learned much more from his apprenticeship than the art of coopering. "I learned about local medicinal herbs, backwoods cooking, making brooms from broom corn and many lessons in life and human nature. A person could not spend time with Alex without being a better person for it."

The last line in Henry's journal sums up his sentiments upon leaving his Sneedville friends: "We said our goodbyes, and I left with a lump in my throat as big as two of Alex's biscuits."



'Workshop' was a converted tobacco barn

'buckets, spooners, butter churns, piggins and a shaving horse.'

Editor's Note—Bill Henry, a chemical operator at Carbide since 1953, has worked at the Y-12 Plant and in the Chemical Technology and Operations Division at ORNL. A junior at the University of Tennessee, he is pursuing a degree in American Studies. In UT's Evening School, he is currently teaching a non-credit class in whittling.

Henry is a member of the Southern Highland Handicraft Guild, Foothills Craft Guild and Tennessee Folklore Society. He describes himself as "90 percent whittler; 10 cooper," since he has only been actively interested in coopering for less than two years.

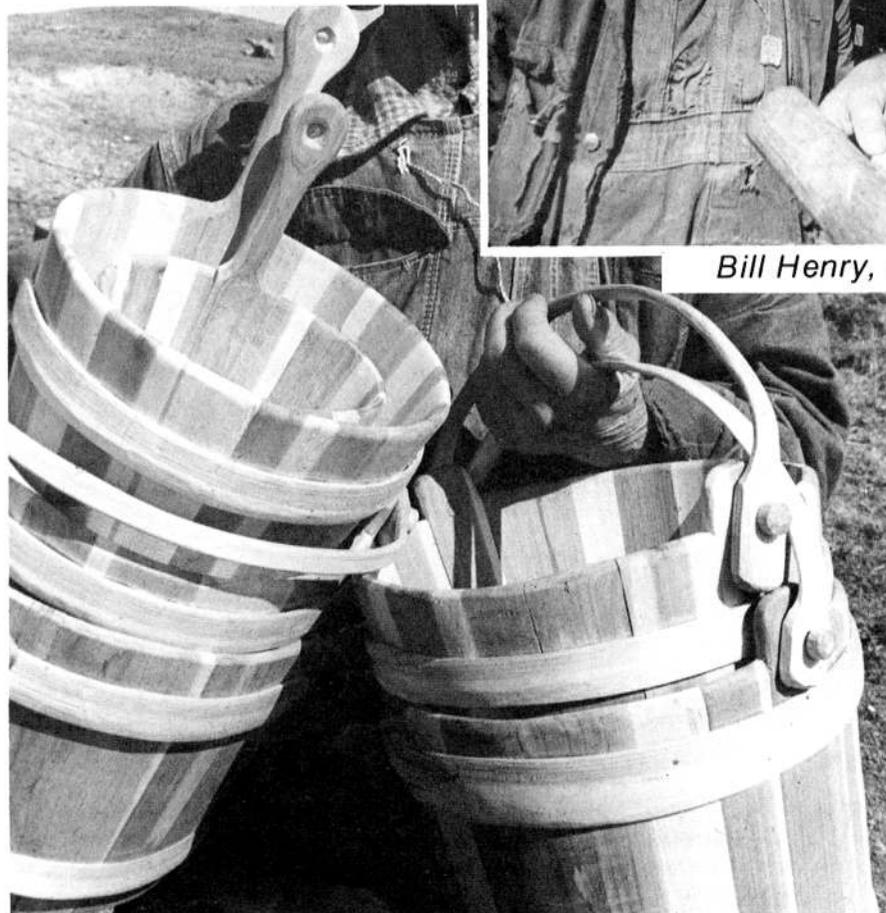
Vessels were fashioned with homemade tools. Power tools were never used.

Since the apprenticeship program, Stewart and Henry were featured in **The Craftsmen in America**—a National Geographic Society book; **Foxfire III**—a series of books on American folklife; **Tennessee Valley Perspectives**; and participated in the Festival of American Folklife—held in Washington, D.C., and sponsored by the Smithsonian Institute and National Park Service. Henry also was invited to conduct a coopering workshop in Peter's Valley, N.J., in July, 1977.

He and his wife, Billie Sue, live in Oak Ridge. They have two sons, Dave and William III.



Bill Henry, right, and mentor, Alex Stewart



division death...

Oscar Mitts Jr., ORGDP Maintenance Division died January 10 in Oak Ridge. He joined Union Carbide in 1946.

A native of Roane County, Mr. Mitts was a member of the County Court there. The Mitts home is at 621 Front Street, Harriman.



Mr. Mitts

Survivors include his wife, Tilda Bennett Mitts; sisters, Stella Hershey,

Margaret Turner and Mary Sylvia; brothers, James, Carl, G. G. and Paul.

Services were held at the Kyker Funeral Home, Harriman, with burial in Roane Memorial Gardens.

Rotary dissolver prototype utilizes remote handling

Fabrication has been completed on the 30-inch prototype continuous rotary dissolver—a major, remotely-operated component for the Advanced Fuel Recycle (AFR) Program, according to W. D. Burch, director, AFR Program.

The rotary dissolver effort is part of a "component development" program to test key parts of the AFR system. After each component checks out on its own, they are combined to work in an "Integrated Prototype Equipment Test," planned for fiscal year 1981. In the developmental stage, the prototype dissolver will utilize only unirradiated materials. A "Hot Engineering Facility," planned for 1988, will use actual "spent" or used fuel elements.

Brian Alenskis, engineer responsible for the dissolver mechanical design, briefly explains how the dissolver fits into the AFR process: "First, a spent fuel element is chopped, heated in an oven and then transferred to a dissolver, where the reusable fuel is leached out in a nitric acid solution."

The continuous rotary dissolver concept was first projected by the Chemical Technology Division staff in 1971. This concept uses a reversible internal drum, which allows continuous dissolution, rinsing and discharging of waste fuel residue.

"This dissolver represents an improvement over previous design because it is the first capable of

operation and maintenance by remote-handling methods," says John Kirkman, component development dissolution task leader.

"Many hours of interplant teamwork have gone into the completion of the rotary dissolver," says Alenskis. Concept and experimental development were accomplished by the Advanced Fuel Recycle Program personnel in the Chemical Technology Division. Dissolver design and design reviews were done by ORNL's Engineering Division and AFR Program. The bulk of the fabrication was done by the Plant and Equipment Division; both stress-relieving and final machining of the drum and other parts were done at Y-12; and final machining of the base frame was completed at ORGDP.

Major contributors

The following persons were some of the major contributors to the dissolver design and fabrication efforts:

ORNL Engineering: Alenskis, John Evans, Clyde Odom, Robert Oliver, Joe Skorski of Experimental Engineering, and Steve Floyd of Project Engineering;

Chemical Technology: Kirkman, Orlan Yarbrow, Mel Feldman and Norbert Grant;

Plant and Equipment: Gene Roy, Ralph Jones, W. O. Wilson, Ken Kirksey and Wallace Hylton.

ORGDP Machine Shop: Ed Edwards

Y-12 Machine Shop: Bill Sahr and Mark Nageotte



Standing in front of completed 30-inch prototype continuous rotary dissolver are: Brian Alenskis, Myron Bender, director of ORNL's Engineering Division, and John Evans.

"Two behind-the-scene contributors were the Procurement and Materials Departments, which effectively supplied the required certified metals," says Bob Farnham, director of the Fabrication Department, Plant and Equipment.

In preparation for the test program, extensive work has been done on dissolver support equipment for the Building 7603 operation site. Besides

the Experimental Engineering Department, efforts have included many other departments: Process Design Engineering, Electrical Engineering, Environmental Control, Engineering Mechanics, Construction Engineering and Instrumentation and Controls Division. Rust Engineering is providing assistance in both procurement and installation of the system.

Organizational changes involve Miriam Guthrie, George Moore

Two organizational changes have been announced in the Employee Relations Division at ORNL. Miriam Guthrie has been appointed head of the Office of Employment and Professional Relations, and George E. Moore is head of the newly established Office of University Relations and Professional Education.

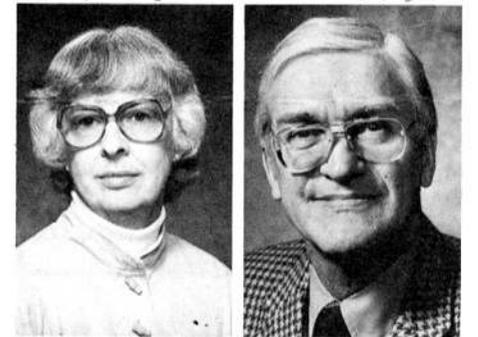
Guthrie, technical assistant to the Laboratory's associate director for Administration since 1976, succeeds G. Daniel Robbins who was recently named director of the Information Division.

In her new job she will be responsible for employment activity at all levels and coordination of the Ph.D. recruiting program for the Nuclear Division. She will also be in charge of the Wigner Fellowship program, Internal Sabbatical Panel, and coordination of the Long-Range Plan for Human Resources.

Guthrie, a native of Massachusetts, received her bachelor's degree in mathematics from Wellesley College and her master's degree in physics from the University of Pennsylvania. Prior to coming to Oak Ridge in 1954, she was a physicist at the Naval Air Development Center in Johnsville, Pa.

She worked as a scientific analyst at the Atomic Energy Commission's Technical Information Center, and in 1966 joined the Laboratory's Neutron Physics Division.

Guthrie initiated the Energy Information Center in ORNL's Information Division in 1972 and served as its director until 1976. Under her direction a bibliographic data base and associated library of energy-related publications were established. She also served as editor of *NSF-RANN Energy Abstracts* and co-editor of *Energy Abstracts for Policy Analysis*.



Guthrie

Moore

The office which Moore heads results from consolidation of the University Relations and Professional Education programs. His responsibilities include management of the technical education program, several cooperative university training programs, guest assignments and noncitizen assistance and other programs involving technical faculty and student participation. Yvonne Lovely will serve as his assistant.

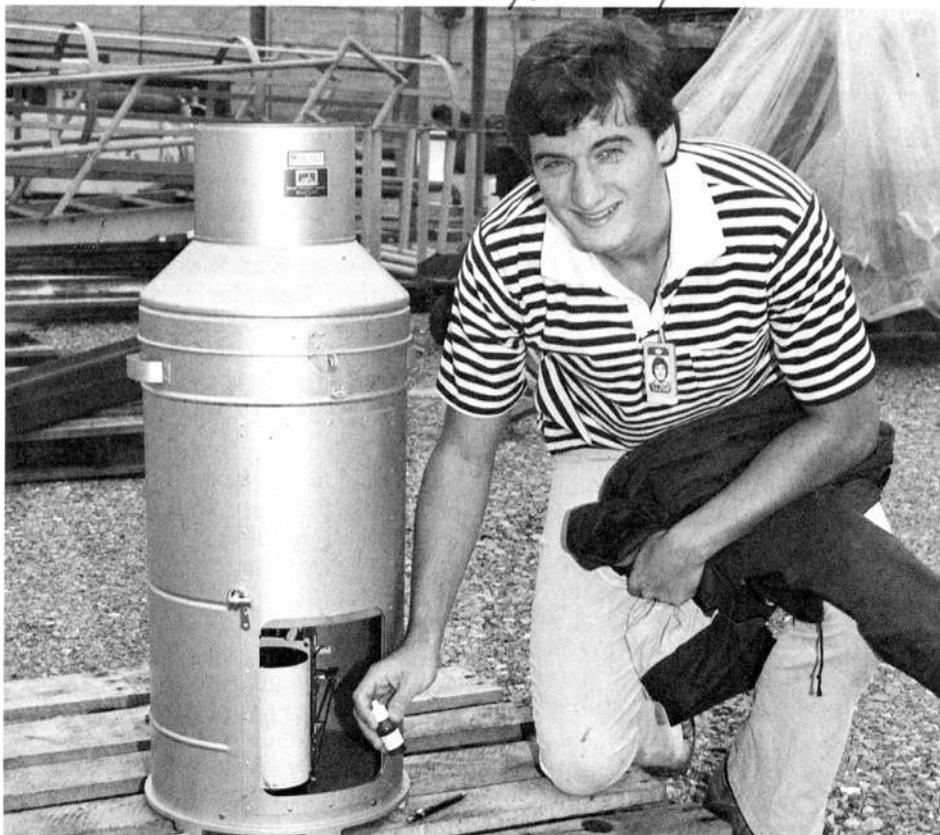
Moore joined the ORNL staff in the Chemistry Division in 1944. He was assigned to the Office of Laboratory and Personnel Protection in 1974 and joined the Employee Relations Division as coordinator of the In-Hours Technical Education Program in 1976.

Moore received his bachelor's degree from Northwestern University and his doctorate in chemistry from the University of Tennessee.

wanted...

ORGDP

JOIN CAR POOL from West Hills area, vicinity of new Bearden Junior High School, to Portal 2, 8-4:30. Ira Kaplan, plant phone 3-5345, home phone 693-5135.



BOUND FOR GEORGIA—Robert Miller, member of a four-man team from ORNL's Engineering Technology Division that will be conducting a rainfall study in northwest Georgia over the next several years, prepares to re-ink the stylus in a recording rain gauge. The gauge is one of about 60 that the ORNL team plans to install this spring in the area around Plant Bowen, a 3200-megawatt, coal-fired power plant near Cartersville, in an attempt to determine whether heat and moisture from the plant's four cooling towers have affected rainfall in the area. The ORNL study, to be conducted in cooperation with the management of Plant Bowen and the Georgia Power Company, is part of a national, DOE-sponsored program called *METER—Meteorological Effects of Thermal Energy Releases*—set up to study possible atmospheric effects of power plant cooling systems. Ari Patrinos of Engineering Technology heads the ORNL study team, which also includes Norbert Chen and Richard Saylor.

recreationotes . . .

K-25 fishing rodeo

A total of 20 lucky fishermen from ORGDP may pick up their awards in Room C-136, Building K-1001. Winners in the nine-category race were:

Largemouth Bass	
1. James L. Greene	8 lbs. 8 ozs.
2. Jerry Hatmaker	6 lbs. 12 ozs.
3. James D. Herrin	6 lbs. 8 ozs.
Smallmouth Bass	
1. D. H. McKamey	4 lbs. 0 ozs.
Bream (Bluegill)	
1. Huey Sides	1 lb. 2 ozs.
2. William H. Caylor (Son)	0 lb. 4 ozs.
Crappie	
1. J. D. Hart	1 lb. 2 ozs.
2. D. J. Trevault	1 lb. 0 ozs.
3. C. W. Castle (Son)	0 lb. 13 ozs.
Rough Fish	
1. J. L. Ailey	27 lbs. 12 ozs.
2. R. M. Sheets (Son)	5 lbs. 0 ozs.
Hybrid or Rock Fish	
1. R. E. Collins	24 lbs. 9 ozs.
2. J. A. Blair	16 lbs. 3 ozs.
Sauger	
1. N. D. Rathbone (Wife)	3 lbs. 4 ozs.
2. Bob Hyde (Son)	2 lbs. 15 ozs.
3. W. M. Cox	1 lb. 9 ozs.
Trout	
1. A. D. Reeder (Retired)	4 lbs. 3 ozs.
2. J. C. Cable (Son)	1 lb. 10-1/4 ozs.
Walleye	
1. H. E. Walters (Wife)	3 lbs. 14 ozs.
2. J. D. McClendon (Wife)	3 lbs. 14 ozs.

ORNL fishing rodeo

ORNL winners in the semi-annual fishing rodeo may pick up their loot in Room J-108, Building 4500N. There were 17 winners in the 10-species race.

Largemouth Bass	
1. W. J. Martin	6 lbs. 7 ozs.
2. J. P. Lankford (Husband)	5 lbs. 8 ozs.
Smallmouth Bass	
1. Roscoe H. Jones (Wife)	3 lbs. 14-1/2 ozs.
2. Thomas J. Stephens Jr.	3 lbs. 8 ozs.
3. David G. Cottrell	2 lbs. 0 ozs.
Stripe Bass	
1. Herbert M. Johnson	3 lbs. 2 ozs.
Bream (Bluegill)	
1. D. N. Fry	0 lbs. 12 ozs.
Crappie	
1. R. G. Shooster	2 lbs. 3 ozs.
2. R. I. VanHook	1 lb. 0 ozs.
Rough Fish	
1. Charles A. Stanley	20 lbs. 0 ozs.
2. Robert R. Spencer	17 lbs. 4 ozs.
Muskie	
1. Arnold Beets	27 lbs. 8 ozs.
Hybrid or Rock Fish	
1. T. R. Bowling	13 lbs. 12-3/4 ozs.
Sauger	
1. Bon S. McCown	4 lbs. 1 oz.
2. C. E. Stanley	3 lbs. 4 ozs.
3. David W. Collins	2 lbs. 4 ozs.
Trout	
1. H. G. Linginfelter (Son)	1 lb. 15 ozs.

Volleyball

The three volleyball leagues saw action up until the holidays started. Only one team sports an unblemished record, as the Skinks in the Nuclear League have three perfect nights under their belts.

League standings follow:

ATOMIC LEAGUE		
TEAM	WON	LOST
Taxi Squad	21	3
Diggers 4	20	4
Diggers 3	19	5
Quarks	9	15
Old Men	3	21
Head Hunters***	0	24
***Dropped from League		

CARBON LEAGUE		
TEAM	WON	LOST
D-Shift	17	4
Fesnakes	13	5
Players	15	6
Mixed Nuts	10	5
Net Profits	8	7
The Flockers	7	5
The Set Ups	10	8
Spiders	11	10
Volettes	11	10
Jedi Knights	6	6
Tom's Turkeys	10	11
Odds & Ends	8	7
The Group	7	8
The High Timers	6	9
The Bombers	5	10
Gag-Genes	7	14
Dread Red Devils	3	9
Streakers	2	13
Wall Bangers	1	8

NUCLEAR LEAGUE		
TEAM	WON	LOST
Skinks	12	0
Pogos	14	1
Over-The-Hill-Gang	16	2
Rad-Fizz	12	3
Orange Team	11	7
Artie's Army	11	7
Ball Busters	7	5
Bio Bumpers	10	8
Fed's	8	7
Bawlers	6	9
Maxwell Demons	7	11
Gauss House Gang	7	11
The Electric Bananas	4	8
Abends	5	13
No-Names	5	13
Sloths	4	11
Sewer Trout	4	14
Net Pickers	2	10

Y-12 fishing rodeo

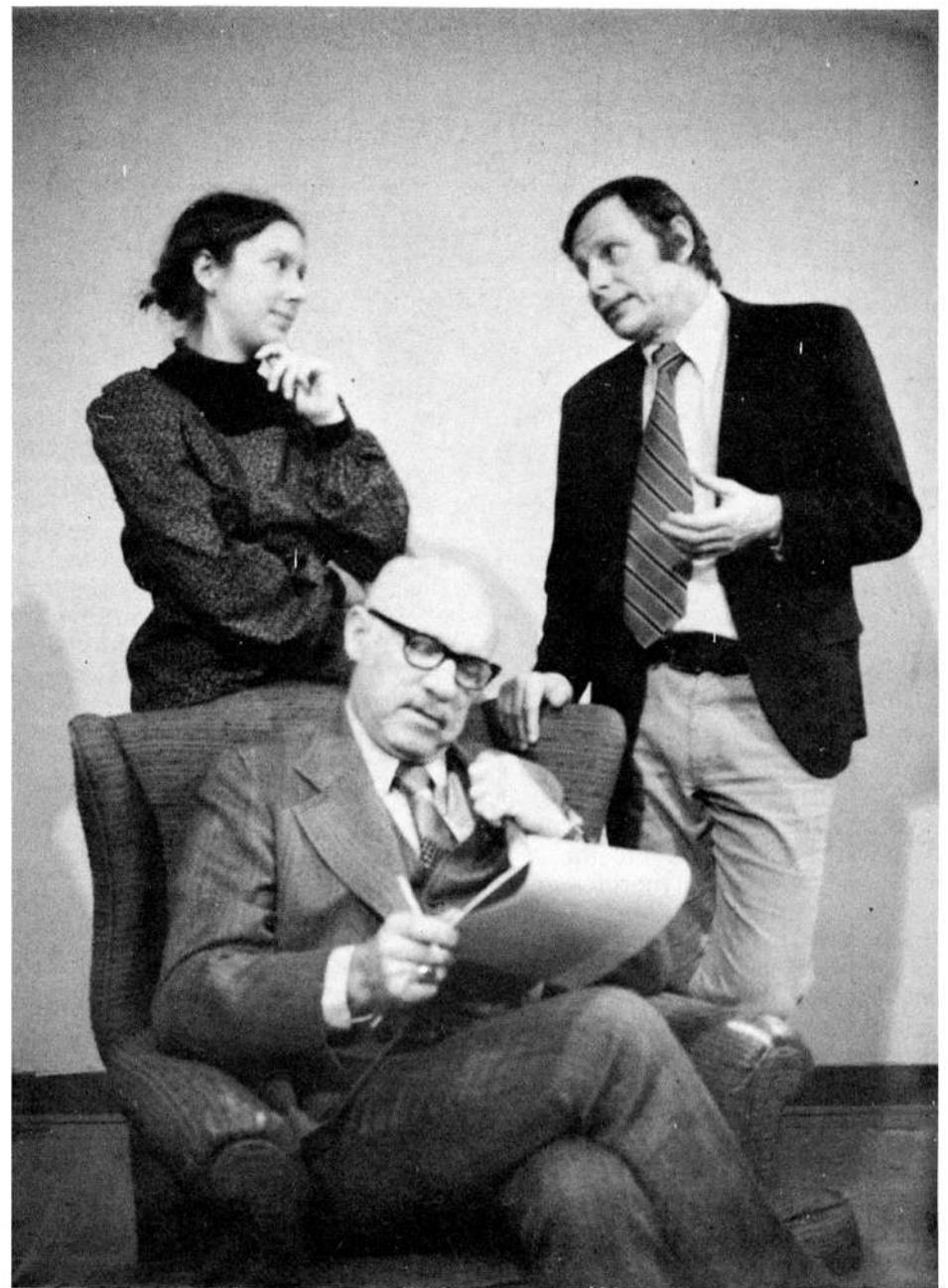
From Y-12 come 21 winners in the nine-group fishing rodeo. Winners may collect their bounty in Building 9711-5, Recreation Office. Winners were:

Largemouth Bass	
1. M. A. Estep	9 lb. 0 ozs.
2. Alvin Reynolds (Son)	7 lbs. 8 ozs.
3. C. O. Campbell Jr. (Son)	4 lbs. 4 ozs.
Smallmouth Bass	
1. Alfred T. Hudgens	2 lb. 0 ozs.
Bream (Bluegill)	
1. George H. Caylor	0 lb. 6 ozs.
Crappie	
1. J. W. Graves	2 lbs. 1 oz.
2. C. R. Anderson	1 lb. 8 ozs.
3. W. R. Jago	1 lb. 2 ozs.
Rough Fish	
1. J. O Stephens	16 lbs. 11 ozs.
2. L. F. Martin	16 lbs. 8 ozs.
3. Don Harrell (Son)	5 lbs. 7 ozs.
Hybrid or Rock Fish	
1. William B. Snyder	32 lbs. 4 ozs.
2. Jerry L. Parrett	29 lbs. 4 ozs.
3. F. L. Clack	26 lbs. 10 ozs.
Stripe Bass	
1. J. L. Harvest Jr.	2 lbs. 0 ozs.
2. R. E. Belcher (Wife)	1 lb. 8 ozs.
Sauger	
1. F. J. Hamilton	4 lbs. 6 ozs.
2. R. S. Phillippi (Retired)	3 lbs. 6 ozs.
3. N. R. Pinland (Retired)	2-3/4 lbs. 0 ozs.
Trout	
1. Joe Jackson (Retired)	1 lb. 1 oz.

it's working



people need people



PLAYHOUSE CAST—Pat Roth, ORGDP Separations Systems and Ronald Rahn, Biology Division, standing, join J. T. Huffstetter, Engineering Division, in the cast of Robert Anderson's drama "I Never Sang for My Father." The play will be seen at the Oak Ridge Playhouse January 27, 28, and February 3, 4, 10 and 11.

Carbide bowling. . . .

Y-12 C League. . .

The Mini-Strikes won the first half of the season over the Rounders. Don Troutman won high series with handicap—718. George Cantrell took the high award for game with handicap—277. Congratulations Mini-Strikes.

K-25 Tuesday. . .

The City Slickers continue to lead in the K-25 Tuesday Night League. The All Stars captured second last week over the Fearless 5. S. A. Levin rolled a 230 scratch for weekly high game. J. H. Peer took high series scratch with a 607.

ORGDP Women's. . .

The Uptowners finished in first position for the first half in the ORGDP Women's League. Linda Gibson was the bowler of the week with 179-225-224=628 handicap series.

K-25 Wednesday. . .

The first half of the K-25 Wednesday Men's League was won by the Planners with 276 points. Weekly prizes were won by Lou Finley for high game—251, and Larry Woods for high series—625.

Y-12 Classic. . .

The Tigers and Ridgers won four points last Thursday to become the new leaders of the second half in the Y-12 Classic League. John Harding rolled a 246 scratch, while Dick Huber had a 608 scratch series for the weekly highs.

ORNL Ladies. . .

After the roll-off held last week, the Mousechasers won the first half over the Avengers. Jean Bangham won the weekly prizes with a 202 scratch game/504 scratch series.

Carbide Family. . .

The Oops lead the Family Mixed League over Double Trouble only by one half point. Harold Zang's 551 and Judy McBee's 512 won high scratch series for men and women.

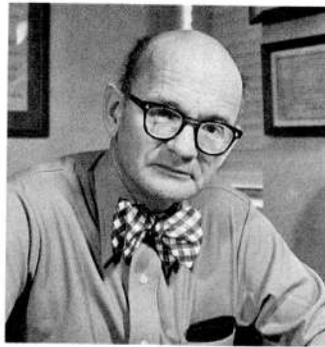
Carbide Shifters. . .

The second half began with B. T. Express taking an early lead. Steve Martin and Bobby Loving took the weekly awards for high scratch game: 226 for Martin; 209 for Loving.

Medicine Chest ...

How to raise your HDL

by T. A. Lincoln, M.D.



(Editor's Note: Dr. Lincoln alternates his regular column with "Medicine Chest," where he answers questions from employees concerning health matters. Questions are handled in strict confidence, as they are handled in our "Question Box." Address your question to "Medicine Chest," Nuclear Division News, Building 9704-2, Mail Stop 20, or call the news editor in your plant.)

A special portion of the serum cholesterol, the high density lipoprotein (HDL), appears to have a protective effect against coronary heart disease. Although this possibility was suggested over 25 years ago, it was largely ignored until 1975, when Drs. D. J. and N. E. Miller in England reported that the total body cholesterol pool increased when the proportion of HDL declined. HDL seems to facilitate the uptake of cholesterol from arteries and its transport to the liver, where it is broken down and excreted. HDL is good to have. The rest of the cholesterol complex is bad. Now the big question is whether or not the level of HDL can be changed.

The obvious first approach is to manipulate the diet. Here we find ourselves in a mine field of controversy! The diet approach to lowering total cholesterol has not been particularly effective. People who really work at reducing their intake of total fat and saturated fat while increasing the proportion of unsaturated fat have had modest success. Unfortunately, there is too little evidence that the lowered cholesterol has any significant effect in preventing a heart attack. There have only been a few efforts directed at specifically raising the HDL with the hope that it will cause a lowering of the rest of the cholesterol complex. Such efforts take years to determine whether they have any lasting effect.

Dr. George Mann, Department of Biochemistry at Vanderbilt University School of Medicine, is one of the leading cynics about diet therapy for preventing coronary heart disease. He titled a review on the subject in the September 22, 1977, issue of the *New England Journal of Medicine*, "Diet-Heart: End of an Era!" He concluded that a generation of research on the diet-heart question had ended in "disarray," and "The dietary dogma was a money-maker for segments of the food industry, a fund raiser for the Heart Association, and busy work for thousands of fat chemists."

Dr. Mann cited the evidence against the effectiveness of diet therapy, but admitted that the correlation of elevated cholesterol with an increased risk of heart attack was valid. There appears to be little evidence from experimental feeding studies that an elevated serum cholesterol is due to a higher dietary intake of cholesterol. (Note: preformed cholesterol is only a

modest portion of the total fat in most diets.) It is not due to an increased synthesis of cholesterol, and it does not appear to be due to a diminished breakdown and excretion of sterol products. Dr. Mann believes the problem must lie somewhere in the conversion of cholesterol to bile acid. Perhaps his idea can lead to another generation of research and more "fat" chemists—preferably, for his sake, biochemists!

In spite of Dr. Mann's views, one needs to look at the total picture before discarding diets. Diets low in carbohydrates and fat appear to increase HDL. Obese individuals have lower HDL levels than lean persons. Dr. William Castelli and his associates at the National Heart, Lung and Blood Institute at Bethesda, Md., found a strong inverse correlation with relative weight. Certainly diet can be used to control weight, and weight loss may cause an increase in HDL.

Impaired glucose tolerance, even though it may not be sufficient to be diagnosed "diabetes," will double the risk of cardiovascular disease. Weight control frequently will improve or correct an impaired glucose tolerance.

Although it may be dangerous to print it, there is evidence that alcohol consumption in MODERATION has a favorable impact on the HDL level and may be the reason why MODERATE consumers appear to have a lower risk than abstainers.

Vigorous exercise is the best way to influence HDL. A study of middle-aged runners done at Stanford found that running—especially marathon running—significantly increased HDL levels in the blood. Running, swimming laps or cycling are examples of vigorous isotonic exercise which have been shown to have a beneficial effect on impaired glucose tolerance, high blood pressure and elevated triglycerides in the blood.

Dr. William B. Kannel, from National Institutes of Health and the Framingham, Mass., epidemiology study of heart disease, says that individuals who quit smoking before age 65 have only half the risk of those who continue to smoke and the benefit accrues fairly promptly. The influence of smoking on HDL levels is unclear.

Even though the field of preventive cardiology is full of controversy, intelligent men of all ages and women after age 40 to 45 can probably improve their outlook with a modest

Social Security tax, base continue upward spiral

If you have been paid already in January, you've noticed an increase in your Social Security (FICA) taxes. The base rate increased from 5.85 percent to 6.05. The wage base also increased \$1,200. . . going from \$16,500 to \$17,700.

The 1978 increase marks the 21st change in taxes since Social Security started in 1937. The rate has gone through 13 changes, including the addition of Medicare in 1966, while the wage base has been increased 12 times.

If you earn \$17,700 this year you will pay a total of \$1,070.85 in FICA taxes for the year. No income above that rate will be taxed.

Social Security taxes have climbed from one percent on a taxable wage base of \$3,000 in 1937 (a total of \$30) to the present 6.05 percent on a wage based of \$17,700 for this year.

The accompanying table shows the history of changes. Note that the tax rate from 1966 to present includes both the FICA tax and the Medicare tax rate. The figures have been combined to save space.

CHANGES IN SOCIAL SECURITY TAXES THROUGH 1978

Year	Tax Rate	Wage Base	Employee Tax	Employer Tax	Total Tax
1937-49	1.0%	\$ 3,000	\$ 30.00	\$ 30.00	\$ 60.00
1950	1.5%	3,000	45.00	45.00	90.00
1951-53	1.5%	3,600	54.00	54.00	108.00
1954	2.0%	3,600	72.00	72.00	144.00
1955-56	2.0%	4,200	84.00	84.00	168.00
157-58	2.25%	4,200	94.50	94.50	189.00
1959	2.5%	4,800	120.00	120.00	240.00
1960-61	3.0%	4,800	144.00	144.00	288.00
1962	3.125%	4,800	150.00	150.00	300.00
1963-65	3.625%	4,800	174.00	174.00	348.00
1966	4.2%	6,600	277.20	277.20	554.40
1967	4.4%	6,600	290.40	290.40	580.80
1968	4.4%	7,800	343.20	343.20	686.40
1969-70	4.8%	7,800	374.40	374.40	748.80
1971	5.2%	7,800	405.60	405.60	811.20
1972	5.2%	9,000	468.00	468.00	936.00
1973	5.85%	10,800	631.80	631.80	1,263.60
1974	5.85%	13,200	772.20	772.20	1,544.40
1975	5.85%	14,100	824.85	824.85	1,649.70
1976	5.85%	15,300	895.05	895.05	1,790.10
1977	5.85%	16,500	965.25	965.25	1,930.50
1978	6.05%	17,700	1,070.85	1,070.85	2,141.70

wanted



ORNL

RIDE with non-smokers from Madison Lane near Hospital, Oak Ridge, to East Portal, 8-4:30. Nell Dunham, plant phone 3-6664, home phone 483-5790.

RIDERS FOR VAN POOL from West Knoxville area to North, South or West Portal. Mike Caldwell, plant phone 3-1331, home 690-8573.

TEMPORARY CAR POOL for one month from Middlebrook Pike, Country Club Apartments, West Knoxville area, to West Portal, 8-4:30. Marian Cover, plant phone 3-1516, home phone 690-6675.

effort. A combination of weight control, specific diet therapy when indicated, vigorous exercise, no smoking and control of elevated blood pressure can be beneficial if begun early enough. It may have some value even up to age 65, but ideally it should be started at age 10! Realistically, it should be started at least by age 35.

The death rate from coronary heart disease started a modest downward trend in 1970. Something must be helping! A gradual change in American life style may be having a favorable impact. The lean, non-smoking jogger is probably leading the pack!

JOIN CAR POOL with nonsmokers from area of Burnham Woods, Fairview Apartments or Wilderness Trace, Oak Ridge, to East Portal, 8-4:30. John Alexander, plant phone 3-1967, home phone 482-5359.

RIDE OR JOIN CAR POOL from Tabor Road, Oak Ridge, to East Portal, 8-4:30. Frances East, plant phone 3-1844, home phone 483-1677.

RIDE or will join car pool from city of Kingston to West Portal, 8 to 4:30 shift. Marilyn Thompson, plant phone 3-1516, home phone Kingston 376-5750.

ORGDP

ONE VAN POOL RIDER wanted from Powell, Karns vicinity, via Emory Road, to Portal 2, 4, or Building 1007, straight day. H. C. Smith, plant phone 3-3267, home phone 947-7377.

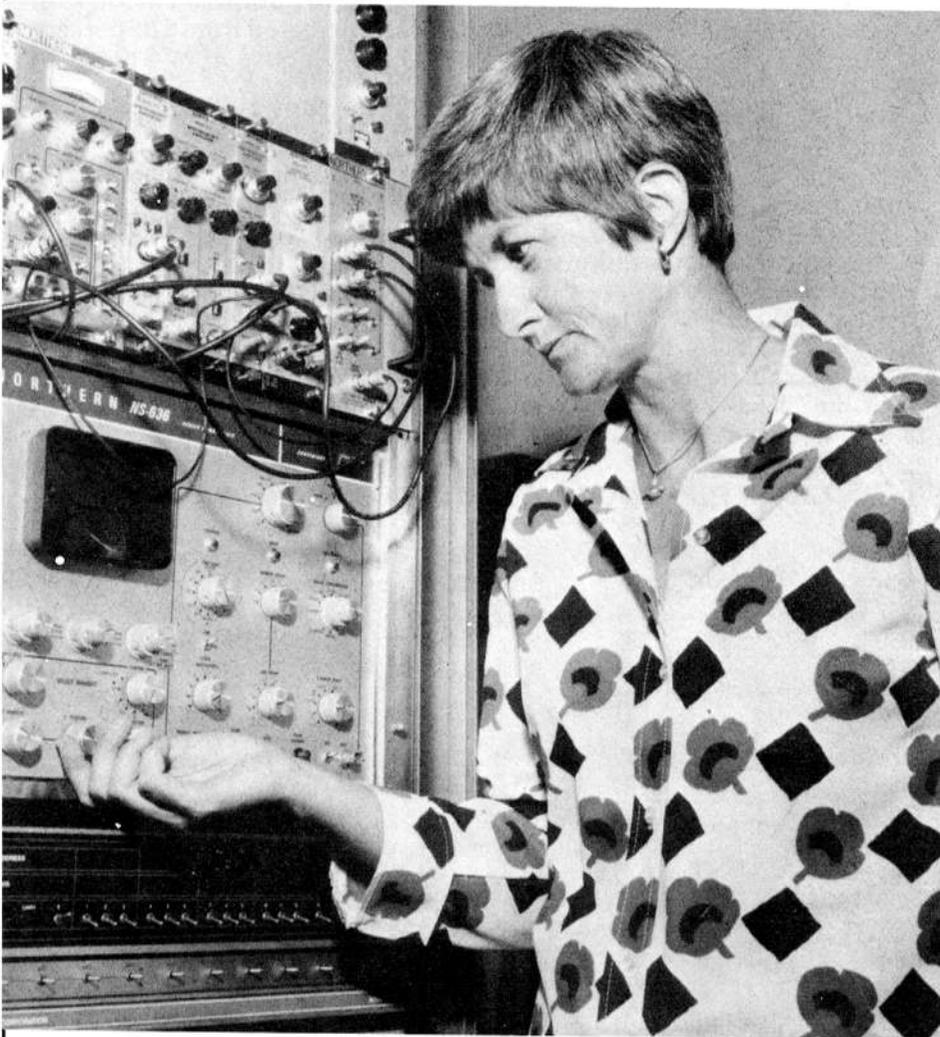
RIDE from east end of Oak Ridge to Portal 3, straight day. Bob Roe, plant phone 3-9771, home phone Oak Ridge 483-0405.

RIDE from Claxton area, to Portal 5, 8-4:30 shift. J. A. Brooks, plant phone 3-3001.

Y-12 PLANT

RIDE from East Knoxville area, Chilhowee Drive, to East Portal, straight day. Kathy Kilby, plant phone 3-7488, home phone Knoxville 522-7098.

Paducah's microanalyst stars in national corporate ad



Pat Sabel Karr, a nuclear microanalyst at the Paducah Plant, recently represented the Nuclear Division in a Union Carbide advertisement which ran in some 60 metropolitan publications.

The advertisement emphasized Union Carbide's concern for and contributions to the nation's energy problems. Favorable points cited from the nuclear standpoint included the company's history in uranium enrichment, the percentage of electricity provided by nuclear power and the progressive research continually being concentrated on the enrichment process.

Karr, a native of Murray, Ky., joined Union Carbide in 1960, following graduation from Murray State University with a B.S. in chemistry and mathematics. She received a master's degree in MSU in analytical chemistry, and earned her Ph.D. from Memphis State University in 1976. Portions of her thesis were presented at ORNL's 20th annual conference on Analytical Chemistry in Engineering and Environmental Technology.

Karr lives on Robinwood Drive, Paducah, with her daughter, Kathleen.

anniversaries . . .

PADUCAH

25 YEARS

James M. Gage, James A. Elliott, Billie W. Ross, Woodrow W. Crutcher, William G. Beasley, James C. McDaniel, Clarence E. Varble, Earl C. Hovekamp, Ezekiel R. Murphey, Harry M. Champion, George L. Dunlap, Joe M. Crutcher, Hassel W. Chapman, James W. Hill and Raymond O. Schwieger.

20 YEARS

Ruth S. Godbold and W. Lavon Pease.

ORNL

30 YEARS

James T. Wiggins, Chemical Technology; Billy J. Strader, Metals and Ceramics; Frank C. Zapp, Engineering; and Elliot Volkin, Biology.

25 YEARS

Paul P. Haydon, Luke R. Sullivan, Harry E. Trotter, Charles Q. Balch, Walter P. Kinser Jr. and William K. Russell.

20 YEARS

William T. Rainey Jr., Joseph L. Thompson, William R. Morton, James L. Langford and Doris C. Smith.

Y-12 PLANT

25 YEARS

Thayer A. Hicman, Billy Ralph Pearson, Louise G. Scogin, Charles R. Wardell Jr., Aubrey G. Bryant, Robert D. Baker, Harry B. Thackston, Albert A. Stooksbury and Hubert L. Felix.

20 YEARS

Lewis H. Spivey, Otha L. Messer Jr., Fred W. Jones, Franklin P. Dickey, Reaford R. Bailey and Harold T. Hill.

ORGDP

30 YEARS

Glen E. Harber, Administrative Services; William E. Cooper, Nuclear Division Finance and Budget; and Gilbert G. Jones, Computer Sciences Division.

25 YEARS

Joseph B. Marshall, Homer C. Turnbow Jr., Delbert Bivens and Robert A. Williamson.

next issue . . .

The next issue will be dated February 2. The deadline is January 25.

division deaths...

James C. Cox, ORDGP Barrier Manufacturing Division, died January 10 at a Knoxville hospital.

A veteran of the U.S. Navy, Mr. Cox joined Union Carbide in 1970. The Cox home is on the Clinton Highway, Oliver Springs.

Survivors include his wife, Eloise Carson Cox; daughter, Wanda Lou Walls; sons, Jerry and Johnny; sisters, Ina Ollis, Mildred Foster and Mary Helen Raby; brothers, Elmer, Harriman and John; and four grandchildren.

Services were held at the Sharp Funeral Home, with burial in the Anderson Memorial Gardens.

William P. Constance, Chemical and General Field Maintenance at ORGDP, died January 4 at the Oak Ridge Hospital. The Constance home is at Route 17, Knoxville.

Mr. Constance was a veteran of the U.S. Air Force and joined Union Carbide in 1952.

Surviving are his wife, Helen Ricman Constance; a son, Jerry; a daughter, Kay Bailey; a granddaughter; and sisters, Betty Stevens, Mary Stiles and Margie Cabe.

Funeral services were conducted at the Robertsville Baptist Church burial in the Oak Ridge Memorial Park. The family has asked that memorials be in the form of gifts to the "Dub" Constance Memorial Fund at the Robertsville Baptist Church.



question box . . .

(Continued from page 1)

ORNL parking tickets

QUESTION: Why do ORNL guards ticket cars in "No Parking" zones, when the guards sit in Laboratory Protection vehicles parking in these same zones? Also, the tickets they stick on cars are very difficult to remove from the windshield. Could they use tickets which would be less permanent?

ANSWER: The "No Parking" zones referred to are reserved for emergency and guard vehicles and not for employee parking. Vehicle parking zones have been established for the safety of employees and guests; it is unfortunate that the numerous violations that continue to occur necessitate periodic surveillance by the Guard Department.

The throw-away tickets you suggest did not prove to be a deterrent to violators, so the stick-on notices have been substituted at ORNL.

safety scoreboard

Time worked without a lost-time accident through January 12:

Paducah	174 Days	2,193,355 Man-Hours
ORGDP	43 Days	1,388,000 Man-Hours
Y-12 Plant	331 Days	10,277,000 Man-Hours
ORNL	263 Days	5,789,083 Man-Hours



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