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DURHAM, NORTH CAROLINA

University's Glassblower Plies a Brittle Occupation

The caveman squatted beside his fire, chewing meat from a hindquarter of the deer he had recently killed. When he finished his meal, he wiped his greasy fingers on his thigh and flipped the bone into the glowing coals with a satisfied grunt.

He stretched out for the evening.

The next morning, he awoke to feel hunger again. As he began to rekindle his campfire, he noticed little shining stones beneath the wood ashes and his eyes widened.

"Wake up, dear," he said to his wife, giving the little woman an elbow in the ribs. "I think I've just discovered glass."

Sound unreasonable? According to Tom Henson, Duke University's research glassblower, this is one of the theories historians have which may explain how prehistoric man became familiar with glass. The bone which was tossed so nonchalantly into the flames by the caveman may have contained enough soda to combine with the melted sand beneath the fire and form glass as we know it today.

Another theory is that early men found glass hardened on the sides of volcanoes after the molten lava cooled. They chipped it from the rock and fashioned tools and ornaments with it.

Through the ages, man began manufacturing glass for himself and refining his techniques. There are records that the Egyptians of the Sixth Dynasty practiced the art more than 5,000 years ago and museums contain evidence of their handiwork.

In the days of the alchemists, glassmaking was included in the "Black Arts," and at one time during the Middle Ages, Venetian glassblowers risked death for divulging secrets to anyone other than their apprentices.

Today the forming of vessels from

glass is both an industry and an artform. At Duke, research glassblower Henson is the university's practitioner of the ancient craft, and he uses many of the same techniques which were discovered thousands of years ago.

Henson is a native of Florence, Alabama. As a young man after his graduation from high school and a three-year hitch in the army stationed in hospitals in New Guinea and the Philippines, he began serving an apprenticeship to become a professional glassblower at the TVA Research Laboratories in Muscle Shoals, Alabama.

Today, after 27 years of working with glass and 20 years in Durham, he is one of 600 master scientific glassblowers across the United States who fashion sophisticated equipment for all manner of scientific inquiry.

Most of the work Henson does is for faculty members and graduate students in physics, chemistry, engineering, and the biological sciences. Whether its distillation or microwave apparatus, vacuum systems or laser tubes, he is able to construct most of the glass equipment they require, but sometimes he finds it necessary to explain why certain designs for the exotic equipment they can think up are not feasible.

"In this work you have to know a great deal about your material," he said. "Glass is a unique substance, and you have to treat it right if you expect results. It's necessary to know where the stresses will be in glass after you change its shape and allow it to cool. Otherwise, it will crack before it ever gets used."

Also, Henson cautioned, glassworking is a very delicate business. "You can't get ahead of yourself," he said. "If you do, you'll have trouble. You can't rework glass like you can metal, and once a

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ON LOCATION IN DURHAM—A TV crew prepares for a shot at the back of the home of Dr. Jay Arena. The filming was for part of a series of public service announcements on child safety sponsored by Prudential Insurance Co. Not pictured here but appearing in some of the series is Karen Prosser, Arena's granddaughter and the daughter of Mr. and Mrs. Art Prosser. Prosser used to be administrator of the Duke emergency department. The child with Arena in this picture is Alan Rucker, son of Mr. and Mrs. Jerry Rucker of Durham, and the dog is "Rebel," who belongs to Carmen Falcone of the Duke athletic department.

Child Safety Expert Stars On TV Spot Announcements

Child safety will be dramatized before millions of television viewers during the next six months through a series of TV announcements featuring Dr. Jay M. Arena.

Presented as a public service by Prudential Insurance Co., the series comprises six one-minute spot announcements which will be shown by some 300 local TV stations throughout the country.

At a reception Wednesday night at the home of Dr. William G. Anlyan, vice president for health affairs, Prudential presented Arena with a \$5,000 check for Duke's Poison Control Center.

Arena established and is director of the Poison Control Center. It was his recognition as an expert on child safety and poisoning that prompted Prudential to ask him to be the central figure in the public service announcements.

Arena was in private pediatrics practice for many years in Durham. He is a professor of pediatrics at Duke and is

past president of the American Academy of Pediatrics.

The films will be distributed on a one-a-month basis and each will relate to a specific safety topic—burn hazards, poison prevention, animal safety, automobile safety, first aid and water safety.

"Inasmuch as an estimated 35 million persons will see these films, we believe Dr. Arena's safety messages will have an important impact on alerting parents and others to simple precautions that can play a vital role in reducing needless and often tragic child accidents," said Philip R. Warth, Prudential's director of public relations.

"While each of the six messages differs in video content," Warth explained, "all conclude with Dr. Arena telling his audience, 'Although children are often victims of fate . . . they should never be victims of our neglect.'"

Recent statistics show that more than one-third of all childhood deaths are caused by accidents.



IN THE SHOP—Research glassblower Thomas Henson fire-polishes a piece of glassware in his shop in the basement of the Physics Building. His craft is an ancient one, and records indicate that the Egyptians of the Sixth Dynasty practiced it in the making of jewelry more than 5,000 years ago. Today, glassblowing is an important adjunct of much of the research which is conducted in chemistry, physics and the biological sciences. (Photo by David Williamson)