

# *Grants Awarded Report*

**From: 10/1/08 to 10/31/08**

**Project Title:** Reintroduction of the Rayed Bean (*Villosa fabalis*) into the Duck River

**Activation Amount:** \$9,434.00

**Agency:** U. S. Geological Survey

**Personnel:**

Co-PI - Kendall Moles, Water Center

PI - James Layzer, Cooperative Fisheries Unit

Support Personnel - Benjamin Davis, Biology

**Abstract:**

The rayed bean mussel has been extirpated from much of its historic range, including the states of Tennessee, West Virginia, Virginia, and Kentucky. Despite these population losses, robust populations occur in the Allegheny River and French Creek in Pennsylvania. These populations provide an opportunity for reintroducing the rayed bean into suitable habitat within its historic range. The Duck River, Tennessee contains one of the most diverse mussel faunas in the USA. Although the rayed bean was extirpated from the Duck River about 25 years ago, major improvements in water quality and physical habitat conditions have occurred in the past 15 years. In response to these improvements, recruitment of most mussel species (including 3 federally listed endangered freshwater mussel species, and other candidate species) has been high, and suggests that reintroduction of the rayed bean would be successful. Objective: Reintroduce the rayed bean into the Duck River. One-thousand or more mussels will be collected by snorkeling or SCUBA diving in the Allegheny River or French Creek in Pennsylvania and transported and released into the Duck River Tennessee. A subsample of individuals will be retained and held long-term in a flow-through raceway at Tennessee Wildlife Resource Agency's Normandy hatchery to monitor survival. If the reintroduction is successful, it could reduce the need for listing.

# ***Grants Awarded Report***

**From: 10/1/08 to 10/31/08**

***Project Title:*** Tennessee Ollie Otter's Statewide Seatbelt and Boosterseat Education Campaign

***Activation Amount:*** \$112,585.00

***Agency:*** Governors Highway Safety Office

***Personnel:***

PI - Kevin Liska, Business Media Center

Support Personnel - Julie Brewer, Business Media Center

Support Personnel - Michelle Wright,

***Abstract:***

# *Grants Awarded Report*

**From: 10/1/08 to 10/31/08**

*Project Title:* THC Computerization Project 2008-09

*Activation Amount:* \$15,000.00

*Agency:* Tennessee Historical Commission

*Personnel:*

PI - Homer Kemp, English

Support Personnel - Calvin Dickinson,

*Abstract:*

The project consists of entering data into a database from Tennessee Historical Commission sponsored historic architecture surveys across the state of Tennessee.

# ***Grants Awarded Report***

**From: 10/1/08 to 10/31/08**

***Project Title:*** 14kW Photovoltaic Solar Power Distributed Generation at TTU

***Activation Amount:*** \$5,000.00

***Agency:*** Tennessee Valley Authority

***Personnel:***

PI - Wenzhong Gao, Energy Center

Senior Personnel - Larry Wheaton, Facilities and Business Services

***Abstract:***

TTU will partner with TVA and Cookeville Electric Department to install approximately 12 kilowatts of PV solar panels on TTU campus at a suitable location. The panels are envisioned to be ground mounted on aluminum angle frames. The solar panels will be connected in series to achieve the proper input voltage for the inverters. TTU will use the solar facility to obtain operation data and generation information to enhance curriculum for renewable energy class and research. These panels are envisioned to enhance TVA's Generation Partners (GP) Program.

# *Grants Awarded Report*

**From: 10/1/08 to 10/31/08**

**Project Title:** Center for the Management, Utilization and Protection of Water Resources - 2007-08 Carryover

**Activation Amount:** \$34,046.00

**Agency:** State of Tennessee

**Personnel:**

PI - Dennis George, Water Center

**Abstract:**

2007-08 Center carryover

# ***Grants Awarded Report***

**From: 10/1/08 to 10/31/08**

***Project Title:*** First Responder Training for Law Enforcement and Fire Department Personnel Clandestine Methamphetamine Science Safety

***Activation Amount:*** \$420,885.00

***Agency:*** U. S. Department of Justice

***Personnel:***

Co-PI - Dennis Parker, Extended Education

PI - Gay Shepherd, University Police

***Abstract:***

# *Grants Awarded Report*

**From: 10/1/08 to 10/31/08**

***Project Title:*** Improving the Triage Process with Trimmed Machine Learning Models

***Activation Amount:*** \$39,327.00

***Agency:*** University of Central Florida (via NIH)

***Personnel:***

PI - Douglas Talbert, Computer Science

***Abstract:***

Current triage decision aids have not adequately addressed weaknesses in the trauma triage process, especially in the area of overtriage. In this project, researchers at the University of Central Florida and at Tennessee Technological University will evaluate the ability of supervised machine learning techniques to construct classifiers capable of improving the trauma triage process. The examined techniques include artificial neural networks, decision tree induction algorithms, k-nearest neighbor classifiers, and support vector machines. We will be using an anonymized, real world data set extracted from the North Carolina state trauma registry to train and evaluate the classifiers.