

## Bill Hlavin Testimony (4 pages)

Chairman Coley, Ranking Member Craig, and Members of the Government Oversight and Reform Committee and Special Guests, thank you for your thoughtful consideration of Senate Bill 123.

My name is WILLIAM HLAVIN. I am a geologist, paleontologist and stratigrapher specializing in Devonian age rocks worldwide. I hold a BS from Ohio University and a Masters and PhD from Boston University. After earning my PhD in Boston I taught at Harvard University and Kent State University. In 1983, I founded Bass Energy, Inc., where I remain today as President and CEO.

During my college years and before I started my company, I worked for the Cleveland Museum of Natural History as a paleontologist. In 1965 the Federal Government named me Chief Paleontologist on the I-71 Federal Interstate Highway fossil salvage project which I will talk about later. This was the first time the Federal Government used the new Federal Antiquities Act for the salvage of fossils encountered during the building of an Interstate Highway and it became a model approach for other such Federal Highway projects across the country. Later, I was appointed Associate Curator of Vertebrate Paleontology at the Cleveland Museum of Natural History. Accordingly, I was responsible for building the fossil collections at the Cleveland Museum of Natural History, including dinosaurs, from throughout North America as well studies and collections focused on the remarkable fossil fish of Ohio.

The first discovery of several large Late Devonian fossil fish bones occurred along the Olentangy River in Delaware, OH and were collected in 1868 by **REVEREND HERMAN HERZER**. These fossils were identified and named in 1873 by **PROFESSOR J.S. NEWBERRY** of the newly formed Ohio Geological Survey as '*Dinichthys herzeri*,' literally translated from Latin into '*Herzer's Terrible Fish*.' *Dinichthys herzeri* is closely related to the later, more prominent and important Genus and Species of *Dunkleosteous terrelli*. This discovery inspired geologists and amateur collectors alike to examine other localities in the State of Ohio that

had the same distinctive black shale exposures which soon led to a second discovery of large fossil fish bones at Sheffield Lake (near Avon Lake) along Lake Erie's shore by a hotel proprietor and local collector by the name of **JAY TERRELL**. Again, **PROFESSOR J.S. NEWBERRY** of the Ohio Geological Survey examined these fossils and found them to be another new species, which he named and described as *Dinichthys terrelli* in 1875, in honor of its discoverer, **JAY TERRELL**.

In 1920, the Cleveland Museum of Natural History was founded, and in 1923 the Cleveland Museum of Natural History hired their first paleontologist, **PETER BUNGART**, from Sheffield, Ohio. **PETER BUNGART** was an experienced fossil collector/carpenter/boat builder who, in his early years, was mentored by **JAY TERRILL** who helped him with his research and collection of fish fossils along the Lake Erie shore and its tributaries. As a result, **PETER BUNGART** spent the next 25 years prospecting for bones of the great Late Devonian fossil fish of the region.

During his lifetime, **PETER BUNGART** amassed an amazing collection. His early collection was sold to the American Museum of Natural History in New York City, a later collection to the British Museum in London, while his remaining collections were donated to the Cleveland Museum of Natural History. This collection formed the nucleus of what would become the best preserved and greatest collection of Late Devonian fossil fish and sharks in the world. The largest complete specimen of a skull of *Dunkleosteus terrelli* was found in Ohio and is now on display at the Cleveland Museum of Natural History. This is the exhibit of *Dunkleosteus terrelli* that excited Bree Obhof.

In 1939, **DR. DAVID H. DUNKLE**, a Harvard trained vertebrate paleontologist, whom I worked with, joined the Cleveland Museum of Natural History staff. Over the next 8 years **DR. DAVID H. DUNKLE** and **PETER BUNGART** published a dozen scientific papers describing the structure and anatomy of *Dinichthys terrelli* (later classified as *Dunkleosteus terrelli*) and related fossil armored fish.

It was in 1956, after much research and study, that *Dunkleosteus terrelli* finally got his current name. **DR. J. P. LEHMAN**, the Director of the National Museum of Natural History, Paris, France, himself an expert on Late Devonian fossil fish, had been studying specimens of the genus *Dinichthys* from Morocco. As a result, he

came to the conclusion that the *Dinichthys* from Morocco was different from the fish in Ohio in regards to their jaw functions. Based upon his study and the works of **DR. DAVID H. DUNKLE** and **PETER BUNGART** of the Cleveland Museum of Natural History, in 1956, **DR. J. P. LEHMAN** proposed a new name for the Ohio *Dinichthys* specimens collected from the upper Huron and Cleveland Shale in Ohio. He separated the original genus *Dinichthys* into two distinct genera and created a new classification of Family (dunkleosterdae), Genus (*Dunkleosteus*) and Species (*terrelli*) to be now known as, *Dunkleosteus terrelli*, in honor of **DR. DAVID H. DUNKLE** and its original discover **JAY TERRELL**.

In the 1960s, Interstate Highway 71 was being laid out and constructed through Cleveland's west side neighborhoods, cutting directly through the Late Devonian fossil-bearing shales of the Big Creek Valley where **PETER BUNGART** of the Cleveland Museum of Natural History had collected fossils in the 1920's. From 1965-67, with the strong support of the Ohio Department of Transportation, field crews from the Cleveland Museum of Natural History combed the piles of shale hauled up by the graders and construction equipment of the Interstate Highway. The Cleveland Museum of Natural History's field personnel worked closely with the construction companies to identify the fossil-bearing rock deposits.

Fossil fish specimens from these deposits now increased the already world famous Late Devonian fossil fish holdings of the Cleveland Museum of Natural History tenfold. These excavations included more specimens of *Dunkleosteus terrelli* and dozens of newly identified fossil fish that were previously unknown to science. The Cleveland Museum of Natural History's collection was now without peer in the world both in the variety of the species and the quality of the preservation of these animals.

*Dunkleosteus terrelli*, the apex predator of the seas, is now considered the most remarkable of all the Ohio Late Devonian fossil fish and the largest animal alive at that time. *Dunkleosteus terrelli* was bigger than a great white shark with enormous armored plates protecting the head with razor sharp meat cleaver-like jaws. These Ohio fossil specimens of *Dunkleosteus terrelli* are known throughout the worldwide scientific community as the largest, best preserved and most

complete specimens of this fierce fish ever found. Replicas of them are found in most of the great natural history museums of the world.

In summary then, I think it's fair to say that the above facts and scientific research clearly support Senate Bill 123 and the State's official recognition of Ohio's internationally famous, Late Devonian fish, '*Dunkleosteus terrelli*' being named Ohio's 'State Fossil Fish.'

Thank you for your thoughtful consideration of my comments.

It is now my pleasure to introduce Harvey Webster, Chief Wildlife Officer and Museum Ambassador for the Cleveland Museum of Natural History, someone I have known and worked with for over 50 years.