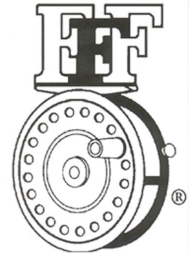


International FEDERATION OF FLY FISHERS™

Conserving – Restoring – Educating Through Fly Fishing

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International Federation of Fly Fishers Awards Grant

Livingston, MT. February 10, 2013– The International Federation of Fly Fishers, a leading conservation group, has announced that the North East Council has been awarded a grant of \$1,500 to assist in a local salt water conservation project.

This grant will support critical scientific research designed to better understand the impacts of elevated water temperature on the expression of an emerging bacterial finfish disease called mycobacteriosis. This lethal infectious disease currently affects > 70% of the resident striped bass in Chesapeake Bay. Although the primary target organs of the infection are spleen and kidney, many affected fish exhibit unsightly skin ulceration (**Figure 1**). The study being funded by IFFF is part of a larger multi-disciplinary field and laboratory-based research program lead by Dr. Wolfgang Vogelbein (**Figure 2**) of the Virginia Institute of Marine Science (VIMS) in Gloucester Point, Virginia. This research effort is currently focused on the main causative agents of the disease (two new species of mycobacteria: *Mycobacterium shottsii* and *M. pseudoshottsii*), the epidemiology of the infection, the role of environmental stressors in disease expression and the potential negative impacts (morbidity/mortality) on the Atlantic coastal migratory stock of striped bass (**Figure 3**). A recently published study led by collaborator Dr. David Gauthier of Old Dominion University (ODU) indicates that this disease causes significant mortality in Chesapeake Bay striped bass.

VIMS and ODU scientists hypothesize that the ever-expanding occurrence of “dead zones” (lack of oxygen) in the deeper cooler portions of the Bay is forcing striped bass to inhabit warmer more stressful surface waters during the summer months. Because striped bass have traditionally used the deeper cooler waters of the Bay as thermal refugia, their

forced residence in warmer surface waters is thought to predispose these animals to infectious disease. Thus it has become critical to develop a better understanding of how environmental stressors such as increasing temperature and decreasing oxygen concentrations might predispose to, and influence the progression of, this lethal infectious disease in this ecologically and economically important finfish. The long-term goal of these research efforts is to develop better predictive eco-epidemiological models that will foster the development of more effective fishery management strategies aimed at the long-term protection of this valuable fishery resource.

The laboratory studies funded by IFFF will be conducted during spring 2013 in the new state-of-the-art VIMS BSL-3 Aquatic Animal Disease Challenge Laboratory (**Figure 4**). The funds provided by IFFF will be used to support a promising part-time undergraduate student who has been a volunteer in the Vogelbein laboratory for the past two years. After college, undergraduate student Josef Seiler plans to pursue an advanced degree and research career in the Marine Sciences. Thus, this grant not only supports cutting edge research on a lethal infectious disease in a valuable fishery resource, but concurrently also provides financial support for the educational development of a promising future scientist.

In 1964 Lee Wulff, a strong advocate for fly fishing and conservation, said, “it occurs to me that a federation of fly fishing groups could be of considerable value.” Not long after his quote, the Federation of Fly Fishers was established and has become the organized voice for fly fishers for all varieties of sport fish. Conservation was extremely important to the founders of the FFF, including Mr. Wulff. It remains a key component of the IFFF’s mission today.

The International Federation of Fly Fishers now provides education on all aspects of fly fishing from the art of casting instruction and fly tying, to the protection of our fisheries. The organization also has a long history of providing funds and volunteers for conservation projects across the United States. Funding of the current project therefore supports both the educational and fisheries protection missions of the group. The IFFF and its Councils are the only organized advocates for fly fishers on international, national, and regional levels.

“The organization is pleased to announce this grant focused on a problem of great concern in a key saltwater species” said Philip Greenlee, President and Chairman of the Board of the IFFF. “Local projects and events are what the organization was founded upon and we are pleased to assist.”



Figure 1. Severe skin ulceration in a striped bass with advanced mycobacteriosis. This is a severe infection. Most affected fish do not show this high degree of ulceration.



Figure 2. VIMS researcher Wolfgang Vogelbein on the water tagging striped bass in the mouth of the Rappahannock River.



Figure 3. VIMS field crew tagging striped bass as part of a large field study in the Rappahannock River investigating the impacts of mycobacteriosis on the striped bass.



Figure 4. The VIMS BSL-3 Aquatic Animal Disease Challenge Laboratory in which the funded laboratory studies will be conducted. Disease-free striped bass will receive an intraperitoneal injection (into the body cavity) containing known numbers of mycobacteria. They will then be maintained at three temperatures (20° C, 25° C, and 30° C) for 8-16 weeks and sampled intermittently for histopathological examination of infection/disease status.