Summer Interns

This summer ten interns were supported by a diversity of grants and contracts.

Brett Buckhout, a SUNY Oneonta Biology Major, is working on an Otsego Land Trust sponsored inventory under the direction of Jeff Heilveil on macrobenthic invertebrates and fish in Oaks Creek.

Devin McShane, a Biology major and Kayla Mehigan, Environmental Science, both from SUNY Oneonta, are conducting water quality monitoring in the Otsego Lake watershed and evaluating aquatic plant communities in Otsego Lake. Devin was awarded a Biological Field Station SUNY Oneonta Biology Department Internship with Rufus J. Thayer Otsego Lake Research sponsorship. Kayla is sponsored by the OCCA.

Justin Hulbert, Fisheries and Aquaculture, SUNY Cobleskill, was awarded a Robert C. MacWatters Internship in the Aquatic Sciences. He is conducting the ongoing studies of the littoral fish community in Otsego Lake and tracking walleye tagged with sonic transmitters to study movement around the Lake. He also is monitoring zooplankton at three sites in the lake, and attempting to determine a relationship between water flea (Daphnia) size and phosphorus content.

We are now routinely posting Otsego Lake water quality updates on our web page bfs.oneonta.edu.

INSIDE
• Summer Interns
• Invasive Species
• Updates

Located in Cooperstown and founded in 1968, the Biological Field Station is a unique facility serving the Upper Susquehanna Watershed, Otsego County and the immediate Cooperstown area. It is primarily a teaching and research center for undergraduate and graduate students from across New York, the United States, and Canada. Directed by Dr. Willard Harman and staffed with talented, experienced professionals, the Biological Field Station is presently the focal point for information about issues affecting Lake Otsego and the Susquehanna River.
Chelsea Slater, Environmental Science, SUNY Oneonta, is evaluating chlorophyll concentrations in profile at three sites in Otsego Lake. She holds an OCCA W.N. Harman Internship.

Alexander Lawrence and Rebekah Obenauer, both Environmental Science majors from SUNY Oneonta, sponsored by the Peterson family Trust, are working with Sean Robinson to ascertain dispersal and colonization of new sites by forest mosses.

Anna VanDerKrake, Environmental studies, from Cazenovia College, is conducting fisheries studies of Moe Pond prior to an anticipated management effort. She is also working with Jeffrey Heilveil on surveys of macrobenthic invertebrates in the pond.

Danielle Willsey, a Biology major from SUNY Oneonta, a BFS sponsored intern, is conducting parasite surveys of Otsego County fish with Florian Reyda describing and illustrating a new species of tapeworm as part of a larger global biodiversity project with international collaborators.

Robert Katz, a Cooperstown High School graduate, supported by the Village of Cooperstown, is studying water quality in the upper Susquehanna River. He anticipates a fisheries inventory in the same region.

Recently Biological Field Station personnel collected a single specimen of water chestnut (Trapa natans) at the north end of the lake near Springfield Landing. We urge all those on the lake to keep a lookout for more individuals of this aggressive plant. If seen, please remove entire plants, including any roots and nuts, from the water and bring them to the BFS Main Laboratory just north of Cooperstown for identification. Two or three water chestnuts were found by BFS students in 1999. None were collected until 2007 when another single specimen was recovered. In both cases intensive searches were conducted that recovered no additional plants. An established colony of water chestnut has been found in the Town of Cherry Valley. Users of all water bodies should be on the lookout for this aggressive exotic. Prior to 2012 it was known from only two locations locally. Bill Harman wrote a proposal for the OCCA, to the Cora Woods Foundation, and received funding to continue water chestnut control on a wetland draining into the Susquehanna River near Oneonta. The plant is still isolated and able to be eradicated with due diligence.

The bottom algae, Didymo (Didymosphenia geminata), is causing serious problems worldwide at this time. It lives in pristine waters and is now in the Catskill region, and can be moved from place to place on wet felt soled waders. Please be careful moving from stream to stream and lakes when using waders. They can be washed with strong soaps, dipped in salt or bleach solutions and thoroughly dried before reuse.
Updates, cont. from p. 4

ready for occupation this fall. A year round facility, it will be principally used by Nigel Mann as a venue to study songbird territoriality and Florian Reyda for parasite studies on Moe Pond warm water fish populations, although any researchers who find it convenient may use the new structure.

Jeff Heilveil, with the help of BFS interns, is conducting qualitative surveys of Oaks Creek, White Creek and Cripple Creek, to compile comprehensive taxa lists for the fish, invertebrates, plants and algae found in those water bodies. The Oaks Creek samples thus far boast over 60 genera of aquatic insects, 15 species of fish, at least two snail species, and other assorted invertebrates. The invasive rusty crayfish has been found at both Oaks and Cripple creeks, but not White Creek, and zebra mussels were encountered only in Oaks Creek. Jeff, as their advisor, led the SUNY Oneonta Biology Club for their annual camping trip on the Thayer Farm.

Florian Reyda is continuing to conduct research on the fish parasites of Otsego Lake. This summer BFS intern Danielle Willsey has been assisting with this fish parasite survey. In addition, Andrew Daigler has been working with Reyda to describe a new species of tapeworm from a stingray from Borneo. Andrew and Danielle, as well as three other students, traveled with Florian to present research results at the American Society of Parasitologists meeting in Richmond, Virginia. Reyda also recently brought his parasitology class to the BFS for a field trip based at the Thayer Farm. He has recently published two papers with colleagues and students, one in *The Journal of Parasitology* and another in *Plos One*. Both were taxonomic studies on tapeworm parasites of freshwater stingrays.

Mike Connerton, NYS-DEC, is again using our acoustic gear to continue with efforts to develop and refine sampling strategies for near surface fish populations.

Holly Waterfield, Matt Albright, and BFS interns Justin, Brett, Chelsea and Rob, played a major role in the 2012 Otsego Lakes Festival venues, providing hands on displays and boat tours.

Village of Cooperstown Dam Study on Otsego Lake Outlet: The engineering firm Malcolm Pirnie/ARCADIS began a study of the dam for Otsego Lake at the end of April. Progress through June includes the completion of a safety inspection of the dam, and the initiation of a hazard classification evaluation, a stability analysis, and an engineering review. The engineering review includes hydrologic and hydraulic modeling to predict how the lake responds to operations at the dam. Options for dam modifications will be developed to provide improved control of lake level, particularly in response to storm events. The study will be completed by the end of September.

Zebra Mussel Control - Village Water Line: A project is underway by the Village Water Department to install chemical treatment at the intake of the Village water line. A new screen, which repels mussels, will be installed at the intake, and potassium permanganate will be injected into the intake line to eradicate mussels that make it into the line. The project is expected to be completed this fall.

Congratulations to Holly and Nathan Waterfield on the birth of Cora Lee on 19 July! We hear that the family is doing great.
**Updates**

Paul Lord and Timothy Pokorny are continuing their work on the Unadilla River to ascertain the extent of and, if possible, the cause of the pearly mussel kills on that river. They are using the new greenhouse facilities at the BFS Main laboratory to continue their research into effective Eurasian water milfoil (Myriophyllum spicatum) biocontrols in two Madison County lakes while also working with the Catskill Regional Invasive Species Partnership (CRISP) to start a regional watershed steward program funded by a contract procured by Bill Harman. Finally, Paul is also working with Joseph “Zarr” Zarzynski and Tom Horvath to map zebra mussel (Dreissena polymorpha) spread across the soft sediments of Otsego Lake.

Management activities continue on Otsego Lake, Canadarago Lake, Afton Lake, Goodyear Lake and Lake Moraine. The Rushford Lake Recreation District, the Kirk Lake Watershed Association and the Indian River Lakes Conservancy, as well as a number of additional Adirondack and Catskill lakes, will also be served. Some will be targeted for management by students in the SUNY Oneonta Lake Management graduate program. At this date it appears that seven students will be enrolled in the fall. Some lake associations, the NYS Federation of Lake Associations, the BFS and the SUNY Oneonta administration through teaching and research assistantships, will support students in that program.

The alewife (Alosa pseudoharengus) population in Otsego Lake has been reduced to the point where it is no longer impacting zooplankton grazing on algae and, therefore, water clarity in the lake. As a result we have reduced walleye stocking to ½ the usual 80,000 fingerlings. We are very pleased that our management efforts have been successful. We have been recently been notified by the National Science Foundation that we are receiving funding for further research to better determine why our success has not been reliably repeated in other inland lakes with similar problems.

We saw Allen Irons 75’ on homecoming weekend. He founded: “Retail Products Group”, a Division of NCH Corporation in 1980 and spent 31 years with them within the larger conglomerate. He developed and was responsible for manufacturing and selling pet waste management products including OUT! and Simple Solution sold at Walmart, Target, Kmart and a host of other big retailers. He is now Senior Vice President, New Business Development, with annual revenues of $112,126,000. “I can honestly say that my Bio degree from SUCO helped all along the way. The first item we sold, in 1980, was an odor eliminator that used an all-natural bacteria/ enzyme solution to digest and eliminate offensive dog urine from carpeting and any water safe material.”

The newly renovated Ornithology Laboratory on the BFS Upper research Site (near Moe Pond) will be...