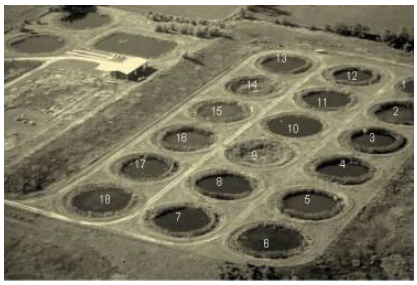
HISTORY OF THE KBS POND LAB

In 1971, a grant from the National Science Foundation (NSF) to Michigan State University provided funds for the construction of 18 experimental ponds, two holding ponds and a reservoir.pond construction

Each experimental pond was approximately 30 m in dia. with a maximum depth of 2 m and was lined with vinyl plastic to prevent seepage losses. The liners in the original 18 ponds were covered with 25 cm of compacted topsoil.



After construction, the ponds were allowed to colonize naturally with flora and fauna from surrounding lakes, and within a few years the experimental ponds closely resembled natural systems. These conditions provided the opportunity to conduct a number of significant experiments in the late 1970's and early 1980's on species interactions and habitat selection in fishes.

However, by the mid-1980's, the ponds had become choked with dense, persistent stands of macrophytes (predominantly Ceratophyllum). These conditions made many types of experiments impossible. In 1987, a grant from the NSF program for Field Stations and Marine Laboratories funded the renovation of 9 of the original 18 ponds.

In these nine ponds, the organic rich sediments and plastic liners were removed. New 20 mil PVC liners were then installed and were covered with a mixture of sand and clay (25 cm depth). This sand/clay substrate was relatively nutrient poor compared to the original topsoil. The remaining original 9 ponds were renovated in a similar manner in late summer 2000, again with support from the NSF and MSU.

These renovations successfully returned the ponds to a more pristine state, although successional processes continue to push them towards denser macrophyte cover and more eutrophic conditions through time. Total phosphorous concentration in the open water of the ponds is generally in the mesotrophic range (15-20 µg/L).

RESEARCH OPPORTUNITIES AT THE KBS POND LABS

All visiting researchers to KBS should refer to the Information for Visiting Researchers web page for information on housing, facilities, bench fees, and contact information. Scientists specifically seeking to use the research facilities at the KBS experimental pond site should contact Pond Site Coordinator Dr. Gary Mittelbach (mittelbach@kbs.msu.edu).

Initial contact via e-mail is preferred. In your e-mail, please describe briefly your proposed plan of study, timetable, funding source, and facilities needed. We will then contact you via phone or e-mail for further discussion of research plans.

POND USE DEFINITIONS

Non-manipulative use - routine monitoring and sampling. No draining or filling of ponds involved.

Manipulative use - Draining and filling of ponds required. Experimental manipulation of pond habitats or construction of experimental enclosures (performed at user's expense).

FEE STRUCTURE FOR USE OF THE KBS EXPERIMENTAL PONDS AND POND LABORATORY

All use of the ponds and pond facilities requires prior approval from the Pond Site Coordinator.

1) Non-manipulative use of the ponds - No charge

2) Non-manipulative use of the ponds, bench space in the pond laboratory - $250/month

3) Manipulative use of the ponds - $300/pond/year

4) Manipulative use of the ponds, bench space in the pond laboratory - $250/month plus pond use charge.

KBS POND LAB SITE INVESTIGATORS

KBS RESIDENT FACULTY

Gary Mittelbach (pond facility coordinator)
Elena Litchman
Stephen Hamilton

MSU CAMPUS-BASED FACULTY

Jenny Boughman

VISITING FACULTY

Chris Steiner (Wayne State University, Detroit)
Spencer Hall (Indiana University, Bloomington)
Mathew Leibold (University of Texas, Austin)
Carla Cáceres (University of Illinois, Champaign)

MSU/KBS GRADUATE STUDENTS

Sara Garnett
Melissa Kjelvick
Raffica LaRosa
Patrick Hanly

MSU/KBS POSTDOCS

Sarah Fitzpatrick

PAST INVESTIGATORS

Mike Allen
Brendan Bohannan
Jonathan Chase
William Cooper
Drew Krammer
Larry Crowder
Tara Darcy-Hall
Amy Downing
Nathan Dorn
Megan Duffy
Timothy Ehlinger
C. Kevin Geedy
James Gilliam
J. Whitfield Gibbons
James Grace
Donald Hall
Casey Huckins
Fred Janzen
Stuart Jones
Jay Lennon
Dave Lytle
Mark Olson
Craig Osenberg
David Raikow
Jelena Patel
Jessica Rettig
Jon Shurin
Elizabeth Smiley
Geoff Smith
Sigrid Smith
Andy Turner
Peter Wainwright
Earl Werner
Leni Wilsman

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