

# **2018-19 ANNUAL REPORT**



W.K. Kellogg  
Biological Station  
MICHIGAN STATE UNIVERSITY



# OUR NEXT CHAPTER

KBS Interim Director  
Dr. Jeffrey Conner



“I’M VERY EXCITED TO JOIN THE KBS COMMUNITY IN 2020. I GREATLY LOOK FORWARD TO MEETING STAFF, STUDENTS, FACULTY, AND OTHER KBS SUPPORTERS AND TO JUMPING ON BOARD TO LEAD KBS TO CONTINUED EXCELLENCE IN THE FUTURE.”

—DR. FREDRIC JANZEN

DEAR FRIENDS AND NEIGHBORS,

The past year at the Kellogg Biological Station has been one of transition and new opportunities. After nearly a century of furthering W.K. Kellogg’s values, we continue to honor his legacy with new initiatives in research, teaching, and outreach in human-impacted and natural landscapes.

Our approach is embodied in the KBS Long-term Ecological Research program, or LTER. The KBS LTER addresses critical ecological and evolutionary questions in agricultural landscapes. In this report, we celebrate the renewal of funding for the 30-year-old project, the only site in the national LTER network focused on row-crop agriculture. The KBS LTER has a new research focus on resilience under project leader Nick Haddad, including the addition of prairie strips to the experimental mix.

KBS faculty member Gary Mittelbach retired last year after a decades-long career in aquatic community ecology. Gary mentored scores of researchers at KBS over the years and was a highly-cited researcher. Teaching a summer field class with Gary for many years was a highlight of my career. I am grateful to his friends and colleagues for creating a fellowship in his honor.

Our field-focused summer academic program continues to evolve and grow. With generous private, federal, and MSU support, we fund transformative summer experiences for our talented students.

It has been my pleasure to serve the outstanding people that have made KBS the perfect academic home for me for 27 years. I’m thrilled to welcome Dr. Fredric Janzen, currently a professor in the Department of Ecology, Evolution, and Organismal Biology at Iowa State University, as the new director of KBS effective June 2020.

I hope you enjoy reading some of our highlights from the past year, and I invite your involvement in KBS in the future!

With thanks,  
Jeff Conner

# THANK YOU

FOR YOUR GENEROSITY TO KBS IN 2018-19!

Each year, contributions to KBS are made in memory or in honor of people whose lives have made lasting impacts. These gifts have been recognized in this list.

## In memory of:

- 1 Richard Brunt
- 2 Prudence Crouse
- 3 Timothy Doody
- 4 Thomas Dvorak
- 5 Georgia Engle
- 6 Richard "Dick" Gross
- 7 Nan Harrison
- 8 Elizabeth Hoffman
- 9 Joe Johnson
- 10 Leslie Juhnke
- 11 Erma V. Kuhl
- 12 Beverly Minger
- 13 Ralph Nutter
- 14 Gary Roecker
- 15 Suzanne Sippel
- 16 Harold Stewart
- 17 Earl Tappenden

## In honor of:

- 18 Richard and Roslyn Cooper
- 19 David Dvorak
- 20 Judy Geary
- 21 Kimberly Ginn
- 22 Katherine Gross
- 23 Kellogg Bird Sanctuary Staff
- 24 Misty Klotz
- 25 George Lauff
- 26 B. William and Jeannette Maxey
- 27 Gary Mittelbach
- 28 Mark Oliver
- 29 Karol Peterson
- 30 Mary Purchase
- 31 Kathy Robbins
- 32 Nick Tracy

## \$10,000 & up

Patricia R. Chipman  
David Grant Dvorak, M.D. & Karol J. Peterson 7, 22  
Katherine L. Gross and Gary G. Mittelbach 21, 24, 25, 27  
Dr. George H. Lauff  
Gene and Melissa McKay 22

## \$5000 to \$9,999

Virginia T. Gross 27  
Don and Peggy Hall 27

## \$1000 to \$4999

The Family of Richard A. Brunt 1  
John R. and Laura A. Davis  
Ann and John Gallagher 22  
Michael and Kathryn Gallagher 22, 27  
Ronald Gross and Adelaide Camillo  
Mr. and Mrs. Christopher T. Hamilton 15  
Mathew A. Leibold 27  
Nancy L. Leiserowitz  
Mark A. and Gail A. McPeck 27  
Thomas C. and Sharin E. Noall  
Craig W. Osenberg 22, 27  
Douglas W. Schemske 27  
Virginia and William Schultz 1  
Kirk W. and Linda R. Setzer 27  
Mr. Donald R. Sly  
Mr. and Mrs. Charles Stoddard 22  
Alan J. Tessier 27  
Jeanne L. and Roger N. Turner 9  
William M. and Ruth Ann Uggen 22  
Patricia Ann Werner  
Charles Young

## \$500 to \$999

Anonymous  
Sherwood and Sharon Boudeman 19  
David D. and Janet A. Cornell  
Elizabeth K. Dapson 9  
Jack Eitnienar 9  
Christopher and Anne M. Flynn 14  
Stephen K. Hamilton 25  
Larry T. and Noel A. Hayward 9  
Anita J. Johnson 9

Michael J. and Carol A. Klug 22  
James M. Larson, Ph.D.  
Michael W. Lau 25  
Jianguo "Jack" Liu and Qiuyun Wang 22  
Douglas and Wendy W. Robbins 28, 31  
Patrick J. and Sarah T. Sandell  
Joseph C. and Karen S. Seelig  
Bradley J. and Kathryn D. Sullivan  
Michelle and Chris Tracy 22, 23, 27, 32  
Catherine Wardley 26  
Jamie A. Wiersema 9

## \$250 to \$499

James Allen and Louise Whitney 9, 25  
Sarah Jo-Czinder Carroll 9, 19, 25  
Dr. Jeffrey K. Conner and Ms. Beth G. Silverman 25  
Guy T. and Julie K. Eckinger  
William J. and Lisabeth M. English  
Frankie N. Fagan  
John M. and Sue Fleming  
Tiffany and Brandon Greenfield 9, 10  
Jon P. Kaufmann, Jr. and Wendy L. Kaufmann  
Pauline C. and Daniel L. Malecki  
Douglas L. Mehlhorn and Alice M. Warner-Mehlhorn  
Amanda K. Meitz  
Jill Y. Roecker 9, 14  
Robert E. and Melicent VanPeenan  
Lori VanSeggern  
J. Richard and Cynthia K. Viel

## \$100 to \$249

Harold L. Allen 27  
Don M. and Judith E. Baldwin 19  
Raymond E. Barnes  
Meloni Blok 14  
Laura C. Broughton  
Carmen R. Cid-Benevento  
Cindy L. Conrod 11, 16  
Richard G. and Roslyn L. Cooper 9  
William G. and Kathleen L. Davis  
Ray and Loretta Dubray  
David C. and Deborah Dunstone  
Lisa J. Dvorak 4  
Shari Elkort  
Marcia E. Fast  
James F. Gilliam  
Paul S. and Joanne M. Gregory  
Emily L. Grman and Christopher F. Steiner 25  
Kara L. and Josh Haas 9  
David L. and Michelle K. Halley  
David N. and Beth A. Hoppe  
Glenn and Christine H. Kabell  
Patricia L. Lawrence

Joseph and Lynn I. Lee  
James E. MacVicar  
Judith M. Maier  
Robert Malcolm and Patricia Pipe 17  
Christopher and Amy Mandoka 5  
Judith I. and David A. Mauriello  
Bonnie M. McGill  
Nelson L. Miller  
Ralph L. Pernice  
Matt and Kimberly S. Roberts  
Balie M. Ross and Arthur J. Stewart 25  
James T. and Vickie A. Schaper 19, 29  
John and Suzanne Shorey  
Kathy Tomson 17  
Lynn Trout  
Andrew M. Turner 25  
Skip J. Van Bloem and Stefanie L. Whitmire 25  
Lindsey A. Walters 25  
David E. and Leila B. Weiss  
Gordon and Karen Wenk 22, 25  
Brook J. Wilke, Ph.D. 25  
John T. and Gayle A. Worthington

## Businesses, foundations and organizations

3M Foundation  
Black Rock Forest Consortium  
Dick Haven Farms LLC  
Eaton Corporation  
Gull Lake Area Rotary Club 6  
Gull Lake Community Schools Foundation  
IBM International Foundation  
Independent Barley & Malt, Inc.  
Irving S. Gilmore Foundation  
Kellogg's Corporate Citizenship Fund 20, 30  
Michigan Brewers Guild, Inc.  
Pfizer Foundation  
Portage Public Schools Amberly Elementary 12  
The Miller Foundation  
The Willburforce Foundation  
WK Kellogg Foundation

We make every effort to ensure all donors are recognized. If you believe your name has been omitted, please contact our Development Office at (269)671-2444. For a full list of this year's donors, including members, visit our website.



# RESILIENCE IN THE LONG TERM

WITH NEW FUNDING  
SECURED, THE KBS  
LTER PROGRAM  
IS POISED FOR ITS  
NEXT CHAPTER.



The KBS Long-term Ecological Research program—LTER—is looking to the future after the 30-year-old project received a renewal of its funding from the National Science Foundation. The \$4.5 million NSF grant, awarded in November 2018, will support the KBS LTER through 2022.

Under the direction of principal investigator Nick Haddad, terrestrial ecologist and professor in MSU's Department of Integrative Biology, the KBS LTER will aim its efforts at addressing an overarching question: What mechanisms contribute to the resilience of key ecosystem functions and services in agricultural landscapes in the face of long-term environmental change?



**NICK HADDAD**

One focus of the KBS LTER is the effect of prairie strips on diversity and ecosystem function. The strips, seeded with more than 20 plant species, run north-to-south along some LTER agricultural plots receiving organic or reduced conventional treatments. Researchers will measure the effects of the strips on aspects of the ecological system, including

organisms like microbes and butterflies, and processes like carbon storage and decomposition.

Findings from LTER research will show how land can be sustainably managed as climate changes. They also will help guide the direction of KBS outreach and education programs, which hinge on creating relationships with agriculture professionals, policymakers, teachers and students, and members of the local community. This diversity of perspectives in turn informs the ways in which the research might be applied in agricultural operations and in policy.

“Because of our three decades of research at KBS LTER and our understanding of long-term fluctuations, we are ideally positioned to test the effects of conservation measures like prairie strips on ecosystem resilience,” says Haddad.

Part of a national network of 28 sites, the KBS LTER was first funded in 1988 and remains the network's only row-crop agricultural site. Since then, hundreds of researchers, from undergraduate students to resident faculty members, have created a legacy of solid scientific inquiry with far-reaching impact.



# SUMMER ACADEMIC PROGRAMS

Each May, scores of undergraduate students from around the country arrive at KBS for three months of learning, work and play that equal one impactful experience. Whether they come here to take courses, complete an internship, or participate in the Undergraduate Research Apprentice—URA—or Research Experience for Undergrads—REU—program, a summer spent at KBS is one not easily forgotten.

This summer, KBS served 72 undergraduate and graduate students taking courses at KBS, and mentored 33 undergraduates in internship, URA and REU programs. Their experiences culminated in the annual undergraduate symposium, which showcased the students' research and internship projects.



THE 2019 KBS UNDERGRADUATE COHORT

“This experience made me **FALL IN LOVE** with research.”

“The **MOST REWARDING** part was seeing our field sites change over time throughout the summer.”



## MEASURING THE — **IMPACT** — OF A KBS SUMMER

### A DIVERSE COHORT

Undergraduate programs: interns, URA, REU



**50%**

female or non-binary



**34%**

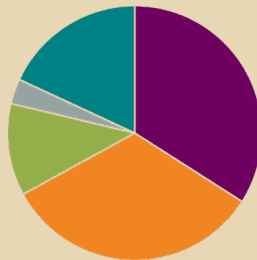
underrepresented in STEM fields



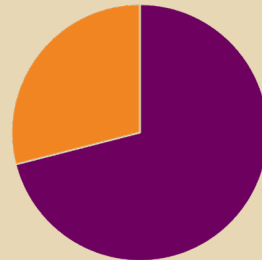
**21%**

first-gen college students

### FINANCIAL SUPPORT



More than \$448K for **grad students, scholars & resident mentors, interns, URAs and REUs.**



Receiving a stipend ranked as a **very important** or **important** factor in being able to come to KBS.

### SKILLS & CONFIDENCE



**92%**

feel more prepared for graduate school.



**88%**

gained confidence in their research abilities.



## DESSERT WITH DISCUSSION FUND HONORING KAY GROSS



In March of this year, an anonymous MSU alum established the **KBS DESSERT WITH DISCUSSION ENDOWMENT**, honoring University Distinguished Professor Katherine (Kay) Gross and her 31 years at KBS - 14 of those as director.

Under her leadership, KBS provided undergraduates with invaluable research and educational experiences, and research opportunities of a lifetime for graduate students. Additionally, we've been able to offer incredible public programs like Dessert with Discussion, or DwD.

In collaboration with the W.K. Kellogg Foundation, Gross created DwD, which is now a signature event connecting MSU/KBS research and the local community. Since 2005, 27 DwD events have reached thousands of community members.

Visit [kbs.msu.edu/support](https://kbs.msu.edu/support) to make your gift supporting DwD and honoring Kay; thank you!

After more than 30 years in the field of aquatic community ecology, Gary Mittelbach retired from his faculty position at KBS in May 2019. Mittelbach's work, including the continuation of research started at KBS in the 1950s by Drs. Earl Werner and Donald Hall, earned him global recognition as a leader in the field of community ecology. His mentorship of researchers at KBS's Experimental Pond Laboratory helped establish KBS as a prominent center of excellence for research and graduate training in aquatic ecology. He was named an Ecological Society of America Fellow in 2015.

To recognize Mittelbach's contributions, colleagues and friends have created the **KBS AQUATIC ECOLOGY FELLOWSHIP**, which will assist with expenses for graduate students conducting aquatic ecology research at KBS, with preference given to students affiliated with the Ecology, Evolutionary, Biology and Behavior—EEBB—program.

Visit [kbs.msu.edu/support](https://kbs.msu.edu/support) to make a gift and join us in honoring Gary; thank you!



**GARY MITTELBACH**

## KBS AQUATIC ECOLOGY FELLOWSHIP ESTABLISHED





## SANCTUARY STAFF HELP TO HATCH A ROMANCE



The 2017 killing of Chuck, a protected Trumpeter Swan in Sunriver, Oregon, shocked a community devoted to restoring that state's population of the threatened birds and left Chuck's mate, Grace, alone and confused.

In early 2019, staff from the Kellogg Bird Sanctuary and the Sunriver Nature Center began setting up the ultimate blind date. A Trumpeter Swan from the Sanctuary, later named Gus, eventually joined Grace in Sunriver and, in July, the two hatched four cygnets to the delight of Trumpeter Swan advocates across the country.

**"WE WERE BEYOND EXCITED TO AID  
IN OREGON'S TRUMPETER SWAN  
RESTORATION EFFORTS."**

- Sara DePew-Bäby  
Kellogg Bird Sanctuary Animal Caretaker

Credit: Sunriver Nature Center & Observatory

This year, the KBS community spent some time studying our own culture and workplace climate. The **KBS CULTURAL INCLUSION COMMITTEE** formed in February 2018 to assess and improve diversity and inclusion initiatives at KBS.

The committee has been productive. It's held a facilitated discussion for the KBS community, created a workshop on increasing diversity in STEM graduate programs, and administered a KBS Climate Survey.

Cultural intelligence, implicit bias and faculty mentor trainings are planned for the 2019-20 academic year.

## TOWARD A CLIMATE OF INCLUSION







W.K. Kellogg  
Biological Station  
MICHIGAN STATE UNIVERSITY

3700 E. Gull Lake Dr.  
Hickory Corners, MI 49060

**ANNUAL REPORT WRITING AND DESIGN:** CARA BARNES, SARAH CARROLL  
**PHOTOGRAPHY:** KBS STAFF, KURT STEPnitz **EDITING:** JEFF CONNER, NICK HADDAD

## IN MEMORIAM: GEORGE H. LAUFF



With fondness and gratitude, the KBS community honors the life and accomplishments of Dr. George H. Lauff, KBS's first year-round resident director, who died Wednesday, Aug. 7, 2019, at age 92.

Lauff came to study at MSU but was could stay for only one year before he was drafted, serving in the Philippines. He returned to campus to complete a B.S. in 1949, followed by an M.S. in 1951. Lauff earned his Ph.D. from Cornell in limnology, the study of fresh water, and minored in oceanography and invertebrate zoology. In 1964, he joined the MSU faculty as KBS director, a post he held until returning to academic duties and special projects in 1989.

Lauff left a great legacy as director that continues today through the George H. Lauff Scholarship Fund, which he established in 1990 to fund KBS student scholarships, supporting the research of both undergraduates and graduate students at KBS. The Lauff Fund was the first endowed scholarship at KBS, and it is still the largest source of scholarship funding for KBS students.

Visit [kbs.msu.edu/support](https://kbs.msu.edu/support) to make a gift in memory to Dr. Lauff; thank you!