

MTU student research partnerships growing for KBIC NRD

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The KBIC Natural Resources Department (NRD) has benefited from Michigan Technological University (MTU) research for many years, and more recently, MTU student research partnerships have been steadily growing. The KBIC NRD would like to highlight the ongoing, community-directed work of five student researchers, and also, draw attention to programs that are currently promoting student work with KBIC and other communities in our region.

Kelley Christensen is an [Environmental and Energy Policy](#) graduate student currently studying two [Superfund](#) sites related to copper mining (Advisor Carol MacLennan): [Silver Bow Creek/ Butte Area](#) in Butte, Montana, and [Torch Lake](#) in Houghton County, Michigan. Kelley examines policy associated with legacy mining, clean up strategies, and community participation in decision making. She actively participates alongside KBIC NRD staff with the [Torch Lake Public Action Council](#) (PAC) and other regional meetings focused on [areas of concern](#).

Ms. Christensen's research skills and expertise have been critical to strengthening the department's capacity for engaging with the Torch Lake PAC and contributing to decisions related to this important water body for traditional *ogaa* (walleye) harvesting. Kelley is dedicated to ensuring that communities have access to the information they need to make decisions on their own behalf. This is also her motivation for creating the [Torch Lake PAC website](#) which shares Torch Lake [data and reports](#), [partner agencies and programs](#), and ways that community members can [get involved](#). Kelley's research with KBIC NRD will continue for the next few years.

Angela Gutierrez is a [Social Sciences](#) undergraduate student currently working towards her bachelor's degree (Advisor Susanna Peters). Her research is part of the newly launched [Undergraduate Program for Exploration and Research in Social Sciences \(UPERSS\)](#) which provides project-based research experiences for undergraduate students to work directly with a faculty mentor for course credit. Angela chose to work with mentor Valoree Gagnon and the KBIC NRD on a Michigan Sea Grant project called, *Anishinaabe-Gikendaasowin* Integrated Assessment Research in the Keweenaw Bay Indian Community for Stewardship and Governance Partnerships.

Ms. Gutierrez is currently learning how to transcribe interviews, and she is compiling knowledge on native plant and insect relationships and the many gifts they provide for each other. In addition to contributing to the integrated assessment, her goal is to author a bilingual children's book that focuses on gratitude for plant and insect beings, and illustrate the book through the eyes of the monarch butterfly. Working with KBIC NRD staff, Angela is gaining a better understanding of Anishinaabe Ojibwa perspectives, experience in building equitable research relationships with tribal partners, and enhancing her development as a social science

professional. The NRD hopes to extend our research relationship with Ms. Gutierrez beyond her one-semester coursework.

Marie Richards is a Sault Ste. Marie tribal member and a King-Chávez-Parks Future Faculty Fellow in the [Industrial Heritage and Archaeology](#) graduate program currently studying cultural landscapes, natural resources, and ethnicity (Advisor Melissa Baird). Marie examines cultural resources management and assessment approaches concerning the Anishinaabeg and reserved treaty rights. Ms. Richards is a recipient of an internship from the [Great Lakes Native American Research Center for Health](#), housed at the [Great Lakes Inter-Tribal Council, Inc.](#) Marie chose to work with mentor Valoree Gagnon and the KBIC NRD on a project called “Foundations for Integrating Traditional Knowledge in Environmental Assessments.”

Ms. Richards participated in the NRD’s [Debweyendan Indigenous Gardens](#) series in 2019; she is also conducting interviews with KBIC staff within different departments and committees. Her goals include a final report that identifies a working description of treaty resources for the KBIC, and a template for surveying harvesting activities by KBIC tribal members. Such a survey has the potential to better inform management and guide restoration activities for the L’Anse Indian Reservation and throughout the [1842 treaty-ceded territory](#). The KBIC NRD looks forward to continuing this important work with Marie.

Deanna Seil is a [Peace Corps Masters International Student](#) who is studying human-livestock-wildlife dynamics in the Tehuacán Cuicatlán Biosphere Reserve (Advisors Audrey Mayer and Evan Kane). Upon returning from her fieldwork in 2019, Deanna was a recipient of a [Community Ambassador Scholarship](#) from the Pavlis Honors College at Michigan Tech. This program is aimed at building and strengthening partnerships between Michigan Tech and community organizations in the Keweenaw by providing community-based service opportunities for students. Deanna chose to engage with the KBIC NRD and Valoree Gagnon for her Community Ambassador experience.

Ms. Seil conducted field and database work with the NRD wildlife program, and she also helped to design and create a comprehensive KBIC informational brochure called, “Shared Governance and Stewardship: Rights and Responsibilities of the Keweenaw Bay Indian Community.” The draft brochure is currently being reviewed by KBIC leadership and others with knowledge of Ojibwa history and American Indian law and policy. The KBIC NRD will be excited to share this brochure with our many governance and stewardship partners in early spring 2020.

Emily Shaw is an [Environmental Engineering](#) graduate student currently studying watershed contamination, environmental policy, and community-directed research (Advisor Noel Urban). Emily currently examines contamination in Michigan [rivers](#), lakes, and fish, and trends over time, including, modeling contamination levels in the environment to implement responsive

environmental policies. She was motivated to establish a research partnership with KBIC NRD to ensure her work was relevant to, and could meet specific needs of, our local fishing community.

Ms. Shaw has participated in many [KBIC events](#) for the past few years, such as the annual [Lake Superior Day beach cleanup](#) and [Healing Circle Run](#), Food Sovereignty Lunch and Learn series, and presenting her work at the first annual KBIC Tribal Water Day in 2019. She recently began doctoral research, and with Valoree Gagnon, will co-create a research guidance document with KBIC for those who desire to work partnership on collaborative research. KBIC NRD expects to continue to strengthen our research partnership with Emily to learn more about restoring watershed health in our community.

MTU student research partnerships have made, and continue to make, important contributions to the KBIC. In addition to the student researchers named above, the KBIC NRD has past and current partnerships with MTU [Senior Design](#) and [Senior Capstone Design](#) engineering teams, [Make a Difference Day](#), [Engineers without Borders](#), and many course-related project teams, undergrad and graduate students, and student interns. The KBIC NRD wishes to extend our sincerest gratitude to MTU students for your high-quality work and service, and allowing our community to be a part of your higher education and professional development - *chi miigwech*.