2019-2020 GATEWAY PROJECTS

RESILIENCE AND DECLINE: ARE WE AT A TIPPING POINT FOR ENDANGERED ACROPORA SP. CORALS IN BELIZE?
Faculty: LISA GREER, Washington and Lee University and KARL WIRTH, Macalester College
Students: NICK AN, Oxford College of Emory; CATHERINE CATERHAM, Franklin and Marshall College; MATTEA HORNE, Pomona College; ARTHUR MABAKA, Washington and Lee University; WILLIAM RILEY, Vassar College; JOLIE VILLEGAS, Wesleyan University; SYDNEY WALTERS, Colgate University; RILEY WATERS, Macalester College; PETRA ZUNIGA, Amherst College

EXPLORING LATE CRETACEOUS WETLAND ECOSYSTEMS: DINOSAURS AND VERTEBRATE MICROFOSSILS IN MONTANA
Faculty: RAYMOND ROGERS and KRISTI CURRY ROGERS, Macalester College
Students: NOLAN CLARK, Pomona College; SEDALIA GOMEZ, Amherst College; KATHERINE IRVING, Macalester College; ASHA LANG, Smith College; GABRIELA ROAT, Colorado College; SUN TUN, Macalester College; KAYLEE VELASQUEZ, Union College; PETER ZIMMERMANN, Oberlin College

2019-2020 ADVANCED PROJECTS

BODY SIZE EVOLUTION OF THE FIRST MAMMALIAN MEGAHERBIVORE DURING PALEogene HYPERTHERMAL EVENTS, WYOMING
Faculty: MICHAEL D’EMIC, Adelphi University and SIMONE HOFFMANN, New York Institute of Technology
Students: GRANT BOWERS, University of Maryland; MICHAEL FORD, Missouri University of Science and Technology; RICHARD GONZALEZ, University of Texas at San Antonio; DANIKA MAYBACK, Illinois State University; EMILY RANDALL, The College of Wooster; ISAAC SAGEMAN, Northwestern University

USING 3D PETROGRAPHY OF MICROLITES AND BUBBLES IN OBSIDIAN TO ASSESS FACTORS GOVERNING ERUPTIVE STYLE FOR RHYOLITIC MAGMAS
Faculty: KURT KNESEL, Trinity University
Students: CHLOE CAMPO, Trinity University; BROOKE DYKSTRA, University of Illinois at Urbana-Champaign; JULIANA FLINT, SUNY Plattsburgh; ZENJA SEITZINGER, SUNY Geneseo
UNRAVELING THE CONTROLS ON CHANNEL FORM AND GEOMORPHIC HISTORY IN NORTHERN YELLOWSTONE NATIONAL PARK, WYOMING

Faculty: LYMAN PERSICO, Whitman College

Students: MARK FOKY, Whitman College; ALICE HINZMANN, Carleton College; CHANTAL IOSSO, Washington and Lee University; APRIL PHINNEY, Wheaton College (IL); ELIZA VAN WETTER, Whitman College
Short Contributions and Poster Presentations – Belize Gateway Project

RESILIENCE AND DECLINE: ARE WE AT A TIPPING POINT FOR ENDANGERED *ACROPORA* SP. CORALS IN BELIZE?
LISA GREER, Washington and Lee University; KARL WIRTH, Macalester College; GINNY JOHNSON, Washington and Lee University

THE RESPONSE OF ALGAE AND HERBIVORES TO *ACROPORA CERVICORNIS* CORAL DECLINE: A CASE STUDY IN CORAL GARDENS, BELIZE

LIVING SPACES: QUANTIFYING MORPHOLOGICAL DIFFERENCES IN *ACROPORA* SPP. CORALS USING 3D PHOTOGRAMMETRY

BROWNING OF THE GOLDEN TIDE: IMPACTS OF ACCUMULATED SARGASSUM ON SEA WATER QUALITY IN AMBERGRIS CAYE, BELIZE

Short Contributions and Poster Presentations – Montana Gateway Project

EXPLORING LATE CRETACEOUS WETLAND ECOSYSTEMS: DINOSAURS AND VERTEBRATE MICROFOSSILS IN MONTANA
RAYMOND ROGERS and KRISTI CURRY ROGERS, Macalester College

CAPTURING A LATE CRETACEOUS PALEOFAUNA: A NEW VERTEBRATE MICROFOSSIL BONEBED IN THE UPPER CRETACEOUS (CAMPANIAN) JUDITH RIVER FORMATION, MONTANA

TAPHONOMIC COMPARISON OF VERTEBRATE MICROFOSSIL BONEBEDS FROM THE UPPER CRETACEOUS JUDITH RIVER AND HELL CREEK FORMATIONS OF MONTANA
Short Contributions – Wyoming Advanced Project

BODY SIZE EVOLUTION OF THE FIRST MAMMALIAN MEGAHERBIVORE DURING PALEOGENE HYPERTHERMAL EVENTS, WYOMING
MICHAEL D’EMIC, Adelphi University and SIMONE HOFFMANN, New York Institute of Technology

LONG BONE HISTOLOGY OF THE LARGE PALEOGENE MAMMAL CORYPHODON
GRANT BOWERS, University of Maryland
Research Advisor: John Merck

ESTIMATING THE BODY MASS OF THE LARGE PALEOGENE MAMMAL CORYPHODON
RICHARD GONZALEZ, University of Texas at San Antonio
Research Advisor: Thomas Adams

 USING CEMENTUM HISTOLOGY TO ESTIMATE AGE IN THE PALEOGENE MAMMAL CORYPHODON
DANIKA MAYBACK, Illinois State University
Research Advisor: David Malone

PALEOENVIRONMENTS CONTAINING CORYPHODON IN THE FORT UNION AND WILLWOOD FORMATIONS SPANNING THE PALEOCENE-EOCENE THERMAL MAXIMUM (PETM), BIGHORN BASIN, WYOMING
EMILY RANDALL, The College of Wooster
Research Advisor: Mark Wilson

CLIMATIC AND PALEOENVIRONMENTAL CHANGES ASSOCIATED WITH THE EVOLUTION OF CORYPHODON THROUGH PALEOGENE HYPERTHERMAL EVENTS, BIGHORN BASIN, WYOMING
ISAAC SAGEMAN, Northwestern University
Research Advisor: Matthew Hurtgen

Short Contributions – Rhyolitic Magmas Advanced Project

USING 3D PETROGRAPHY OF MICROLITES AND BUBBLES IN OBSIDIAN TO ASSESS FACTORS GOVERNING ERUPTIVE STYLE FOR RHYOLITIC MAGMAS
KURT KNESEL, Trinity University

PRE-ERUPTIVE TEMPERATURES AND ERUPTION DYNAMICS OF RHYOLITE LAVA, NIMBIN RHYOLITE, EASTERN AUSTRALIA
CHLOE CAMPO, Trinity University
Research Advisor: Kurt Knesel, Trinity University

MICROLITE ORIENTATIONS AND STRAIN LOCALIZATION WITHIN THE BASAL SHEAR ZONE OF A LARGE RHYOLITIC LAVA, MINYON FALLS, AUSTRALIA
BROOKE DYKSTRA, University of Illinois at Urbana-Champaign
Research Advisor: Patricia Gregg

FLOW BANDS AND MICROLITE TEXTURES IN OBSIDIAN, MINYON FALLS RHYOLITE, AUSTRALIA
ZENJA SEITZINGER, SUNY Geneseo
Research Advisor: Dori Farthing
UNRAVELING THE CONTROLS ON CHANNEL FORM AND GEOMORPHIC HISTORY IN NORTHERN YELLOWSTONE NATIONAL PARK, WYOMING
LYMAN PERSICO, Whitman College

UNRAVELING THE GEOMORPHIC HISTORY OF BLACKTAIL DEER CREEK
TRENT FOKY, Whitman College
Research Advisor: Lyman Persico

POTENTIAL MECHANISMS OF GEOMORPHIC CHANGE OPERATING ON FLOODPLAIN AND CHANNEL FORM ON THE GALLATIN RIVER IN NORTHEASTERN YELLOWSTONE
ALICE HINZMANN, Carleton College
Research Advisor: Mary Savina

CLIMATE INFLUENCES ON STREAM PROCESS IN YELLOWSTONE OVER THE LAST 7000 YEARS: A LOOK AT THE STRATIGRAPHIC RECORD
CHANTAL IOSSO, Washington and Lee University
Research Advisor: David Harbor

GEOMORPHIC CONTROLS ON HYDRAULIC PROCESSES OF BLACKTAIL DEER CREEK, YELLOWSTONE NATIONAL PARK
APRIL I. PHINNEY, Wheaton College (IL)
Research Advisor: Andrew J. Luhmann

EVERY PEBBLE COUNTS: RECONSTRUCTING THE FLUVIAL HISTORY OF BLACKTAIL DEER CREEK IN THE NORTHERN RANGE OF YELLOWSTONE NATIONAL PARK
ELIZA VAN WETTER, Whitman College
Research Advisor: Lyman Persico