

Spring Symposium 2018

Event Schedule



Wednesday

May 23, 2018

Eastern Oregon University

- | | |
|--------------------|--|
| 8:00 am - 9:00 am | Participant Registration / Poster Setup
Loso Lobby |
| 8:00 am - 9:00 am | Continental Breakfast
Loso Lobby |
| 9:15 am - 10:15 am | Opening Ceremony with Keynote Speakers
McKenzie Theatre |
| 10:30 am - 2:30 pm | Posters / Talks / Panels / Performances |
| 12:00 pm | Musical Presentation |

We invite all visitors to Spring Symposium 2018 to attend presentations by our guests from regional high schools participating in the Oregon Teacher Pathway program in collaboration with EOU's College of Education.

OTP Student presentations will be held in the lobby of Badgley Hall beginning at 10:20 am.

OTP Student names and presentation titles can be found on Page 40 of this program.

Abstract titles and descriptions on the following pages are as submitted by the presenters and sponsoring faculty. Many thanks to our faculty sponsors: Colin Andrew, Karen Antell, Marie Balaban, Cori Brewster, Robert Butler, Anna Cavinato, Alysia Cohen, Matt Cooper, Joe Corsini, April Curtis, Ryan Dearing, Teresa Farrell, Colby Heideman, Ron Kelley, Nancy Knowles, Laura Mahrt, John McKinnon, Kyle Pfaffenbach, Jennifer Puentes, Kelly Rice, John Rinehart, Brian Sather, Michael Sell, Amy Servid, Jodi Varon, and Amy Yielding.

**** Keynote Presentations ****

Kolton Cobb

Title of Project: *Heart Rate Variability In Relation To Performance Predictability*

Location: McKenzie Theatre

Faculty Sponsor: Kyle Pfaffenbach

See abstract on page 14

Haley Stammen

Title of Project: *Manifestos as a Form of Discourse: Rhetorical Analysis of Christopher Harper Mercer's "My Story"*

Location: McKenzie Theatre

Faculty Sponsor: Nancy Knowles

See abstract on page 35

Presentations by Location

Location / Time	Format	Presenters	Faculty Sponsor
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*Ackerman Art
Studio Annex*

11:00-1:00	Exhibit	Berenice Chavez & Audrey Lind	Michael Sell
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Loso Hall, Room 114

10:30 am	Talk	Joel Jacobs	Amy Yielding
11:00 am	Talk	Taylor Hunt	Amy Yielding
11:30 am	Talk	Madisen Garlie	Amy Yielding
12:00 pm	Talk	Zachary Lacey	Amy Yielding
12:30 pm	Talk	Joel Jacobs	Amy Yielding

Loso Hall, Room 115

10:30 am	Talk	Dakota Gordon	Ryan Dearing
11:00 am	Talk	Kevin Russell	Ryan Dearing
11:30 am	Talk	Mick Wilson	Ryan Dearing
12:00 pm	Talk	Miranda Manley	Ryan Dearing
12:30 pm	Panel	Neil Hetrick & Dakota Gordon	Jodi Varon
1:30 pm	Talk	Conor Wood	Ryan Dearing
2:00 pm	Talk	Allyson Johnson	Ryan Dearing

Loso Hall, Room 116 (Hosted by Phi Kappa Phi)

10:30 am	Talk	Uwase (Nadine) Musekura	Jennifer Puentes
11:00 am	Talk	Hannah Brandsma	Jennifer Puentes

Location / Time	Format	Presenters	Faculty Sponsor
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Loso Hall, Room 116 (Hosted by Phi Kappa Phi)

11:30 am	Talk	Ana Cisneros-Gonzalez	Jennifer Puentes
12:00 pm	Talk	Nicole Almanza & Thaine Nakosone	Alysia Cohen
12:30 pm	Panel	Haley Stammen & Sanheshke Wakinyan	Cori Brewster
1:30 pm	Talk	Kody Bartlett	Ryan Dearing

Loso Hall, Room 117

10:30 am	Talk	Randi Johnson	Nancy Knowles
11:00 am	Talk	Haley Stammen	Nancy Knowles & Cori Brewster
11:30 am	Talk	Cara Campbell	Cori Brewster
12:00 pm	Talk	Yasmin Mookerdum	April Curtis
12:30 pm	Talk	Jorden Payne	April Curtis
1:00 pm	Talk	Kellie Nostrant	April Curtis

McKenzie Theatre, Loso Hall

10:30 am	Panel	Jordan Shaw, Sarah Bonner & Ashton Kazmierski	Brian Sather
12:00 pm	Perform	Music Department	Matt Cooper
1:15 pm	Perform	Curtis Carson	John McKinnon

Schwartz Theatre, Loso Hall

11:30 am	Perform	Cast Members of "Bus Stop"	Teresa Farrell
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Poster Presentations by Location & Time

Location/Time of Poster Sessions

Presenters

Faculty Sponsor

Badgley Hall, Simmons Gallery (Lobby)

10:20 am – 12:05 pm

OTP Students from regional high schools

Tawnya Lubbes

Lobby of Loso Hall – 10:30 am to 11:30 am

Cole Ashby & Matt Wong

Alysia Cohen

Michelle Epps

Laura Mahrt

Meagan Ghinter

Marie Balaban

Justin Hughes

Kyle Pfaffenbach

Joel Jacobs, Lena Johnson, Robie Davis

& Bailey Schroeder

Ron Kelley

Ryan Jaggi

Kyle Pfaffenbach

Nicholas Jones & Kaitlyn Reynolds

John Rinehart

Carrie Laurence

Kelly Rice

McKenzie Manley

Kelly Rice

Margaret McClean & Elizabeth Olsen

Laura Mahrt

Khadija Neumeyer & Amy Arnzen

Kyle Pfaffenbach

Callie Norman & Cheyenne Camara

John Rinehart

Timothy (Garret) Sawyer

Alysia Cohen

Adam Sisson

Kyle Pfaffenbach

Brianna Stavaas, Cheyenne Camara,

Kaitlyn Reynolds, Nick Jones & Callie Norman

John Rinehart

Location/Time of Poster Sessions

Presenters

Faculty Sponsor

Lobby of Loso Hall – 11:30 am to 12:30 am

Makayla Adams & Christopher Youngman

Amy Servid

Trace Florek

Kelly Rice

Meredith Geissinger & Tanner Pearson

Karen Antell

Briton Hansen

Joe Corsini

Erika Lavadour-Yohe

Anna Cavinato

McKaden Manderbach, Tayton Gerlach-Duby

& Jagdeep Deol

Karen Antell

Ashlee Muller

Kelly Rice

Callie Norman & Callie Krewson

Colin Andrew

Blake O'Donnell

April Curtis

Emily Paz

Kelly Rice

Rosalie Salisbury

Karen Antell

Brianna Stavaas, Madeline Gianandrea

& Eli Holeman

Ron Kelley

Ben Telleria, Trace Florek & Emily Paz

Kelly Rice

Cassidy Watkins

Kelly Rice

Austin Winegar & Riley Carter

Colby Heideman

Location/Time of Poster Sessions

Presenters

Faculty Sponsor

Lobby of Loso Hall – 12:30 pm to 1:30 pm

Charlette Burghard & Peyton Plucker
Peter Cain, Taylor Waldon & Jamie Butler
Jessica Carter
Kaley Cope & Joshua Annas
Makensie Forsyth & Erin Burgess
Hannah Mabbott
Erica Nadermann & Nicolas Corsini
Paige Navratil & MeeMee Crossler-Laird
Brittany Peterson, Matthew Hoppe
& Braden Staebler-Siewell
Anna Roslander, Bobby Pendleton
& Natalie Mitchell
Bailey Schroeder
Emily Spinden, Maria Finn & Meagan Ghinter
Christa Tryon, Carissa Hughes, Tony Capps
& Sally Gee
Bailey Weinke

Ron Kelley
Kyle Pfaffenbach
Anna Cavinato
Cori Brewster
Karen Antell
Kelly Rice
Joe Corsini
Marie Balaban

Anna Cavinato

Kyle Pfaffenbach
Kyle Pfaffenbach
Robert Butler

Joe Corsini
Kelly Rice

Presentation Abstracts

(in Alphabetical order by last name)

Makayla ADAMS

Project Title: Investigating Gold Nanoparticle-Protein Interactions

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Amy Servid

Abstract: Gold nanoparticles have medical applications and exhibit interesting spectroscopic properties. It is known that adsorption of proteins onto nanoparticle surfaces can change the biological activity and therapeutic potential of nanoparticles. Therefore, our goal is to explore protein-nanoparticle interactions with gold nanoparticles using spectroscopic methods. We provide an outline of the project plan and describe our steps toward the engineering and *Aequorea victoria* green fluorescent protein (GFP) with a gold binding peptide on the N-terminus. Future work will involve expression of the modified protein and binding of the protein to nanoparticles to explore the optical properties of GFP-nanoparticle conjugates.

Nicole ALMANZA

Project Title: Culture's Influence on Health; A Deeper look into EOU Minority Student's Health Behaviors and Barriers in La Grande

Type of Presentation: Talk

Presentation Time: 12:00 pm

Faculty Sponsor: Alysia Cohen

Abstract: Health disparities among minority population is a national public health problem. Compared to the majority population (White), minority populations are more likely to be physically inactive, consume fewer healthy foods, and have one or more chronic diseases such as hypertension and type 2 diabetes. EOU is home to a host of minority groups including Hispanic/Latino, Asian and Pacific Islanders, African Americans, and Native Americans. Health behaviors are influenced culturally and through social relationships. Transitioning to a new environment for college may or may not reflect a student's cultural and practiced physical and nutritional health behaviors. College is a unique environment to develop and practice culturally reflective healthy behaviors with the potential to change the health trajectory of at risk populations. To better address ongoing national and global epidemic of physical inactivity and specifically the needs of EOU minority students, focal group interviews were conducted with Hispanic/Latinx and Pacific Islander EOU students. As a result of this project, we will provide information on physical and psychological barriers of physical activity, exercise, and nutrition experienced by culturally diverse EOU students. Recommendations for enhancing EOU minority students' awareness and knowledge of positive health behaviors will be presented.

Joshua ANNAS (See abstract under Kaley COPE)

Amy ARNZEN (See abstract under Khadija NEUMEYER)

Cole ASHBY

Project Title: How exercising can affect people at work

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Alysia Cohen

Abstract: The purpose of the project was to learn more about physical and psychological outcomes of an adult beginner strength training program. Program participants included EOU faculty and staff. Participants completed 1 day strength training for 6 weeks. The program emphasized education and movement instruction to safely perform functional strength training exercises: Back squat, overhead press, deadlift, and bench press. Via an online survey participants addressed questions relating to physical activity behavior, perceived energy and stress levels, sleep behavior (quality), and confidence level to perform functional strength training exercises on their own. Results of this project suggest no significant change in perceived energy or stress levels or physical activity behavior during the strength training program however, an increase was observed in participant confidence to perform functional strength exercise on their own. The results suggest participation in an instructional strength training program may lead to improved physical activity behavior and long-term changes in muscular fitness and overall health.

Kody BARTLETT

Project Title: Gender in World War II Propaganda

Type of Presentation: Talk

Presentation Time: 1:30 pm

Faculty Sponsor: Ryan Dearing

Abstract: This presentation will examine the manipulation of gender ideals and imagery as expressed through propaganda during World War II. My research is based on history journal articles, online databases, and historical archives. This project uses images (posters) to reflect the manipulation of gender roles during World War II. I argue that during the Second World War, the United States government manipulated gender in propaganda posters to entice men to fight for their country by exploiting the fear of a loss of masculinity and an attack on female virtue. Posters were also used to attract women to factory work by highlighting their independent and resourceful qualities while male workers were overseas. During my presentation I will examine a few of the most significant posters that highlight the manipulation of gender roles and ideals during this period.

Sarah BONNER (See abstract under Jordan SHAW)

Brianna BRADLEY (See abstract under Callie NORMAN)

Hannah BRANDSMA

Project Title: How Do College Students at a Rural University Participate in Food Movements?

Type of Presentation: Talk

Presentation Time: 11:00 am

Faculty Sponsor: Jennifer Puentes

Abstract: Food-related issues, such as food insecurity and food movements, have become more prevalent in popular media in recent years. Food movements focus on the types of food consumed, how the food is produced/harvested, where it is produced/purchased, and more. Despite the increased interest, however, these movements often exclude or discount the experience of those in marginalized groups, such as lower income individuals. College students have also been left out, despite the recent (often student-led) advocacy for more sustainable foods on campuses. As tuition is rising, many students have been forced to make difficult financial decisions and eating healthy or purchasing local/organic foods can be challenging on a budget. Many students, especially in a rural area, also face other barriers, including a lack of time or knowledge of resources. In this study, I examine students' experiences with, and participation in, food movements through surveys and interviews at a small, rural Oregon university. Preliminary results indicate that many students are unsure of the definition of a food movement. Researching the often unique positions and attitudes of college students can help indicate how to best expand and improve alternative food initiatives to include minorities, those with lower incomes, and those with other barriers.

Haley BREEN (See abstract under Jessica CARTER)

Erin BURGESS (See abstracts under Rosalie SALISBURY, Makensie FORSYTH and McKaden MANDERBACH)

Charlette BURGHARD

Project Title: Determination of Pyrrolizidine Alkaloids in *Heliotropium molle* from the Plant Family Boraginaceae

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Ron Kelley

Abstract: Pyrrolizidine alkaloids (PA's) are potentially toxic, naturally occurring secondary products typically found in the plant family Boraginaceae. As a part of continuing alkaloid analysis of the family Boraginaceae, the North American plant *Heliotropium molle* was analyzed to establish a GC-MS PA profile. Preliminary findings indicate the presence of unsaturated PA's dominated by two compounds. Preliminary TLC analysis of the sample displayed the presence of four compounds. Preliminary GC-MS analysis displayed six compounds including two pairs of isobaric structures. Isolation of the two major compounds will allow for the NMR elucidation of the structures.

“BUS STOP” CAST MEMBERS

Project Title: Bus Stop Scene Performance

Type of Presentation: Performance

Presentation Time: 11:30 am

Faculty Sponsor: Teresa Farrell

Abstract: As a means to promote the hard work of the Theatre Department, this scene will highlight the final production of the year. It is meant to both be a celebration of the accomplishments of the students as well as a means to draw a larger audience for the final production. The actors will perform a selection from the script that is between 3 and 10 minutes in length. They will be in full costume to enhance the performance and context of the script. Information regarding the production dates will also be shared. This production is directed by Dr. Teresa A. Farrell from the College of Education.

Jamie BUTLER (See abstract under Peter CAIN)

Peter CAIN

Project Title: Work Demands of Wildland Firefighters

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Kyle Pfaffenbach

Abstract: Wildland firefighting is a demanding job. Firefighters produce physical work during long shifts for multiple days in a row during warm months of the year in arduous terrain. While structural (city) firefighting is well studied, there is a lack of data characterizing the work demands of wildland firefighters. Thus, the purpose of this study was to collect physiologic data from wildland firefighters to better understand their work demands, and to be able to tailor specific training and nutritional programs to optimize their performance in the field. For this pilot study, we formed a partnership between EOU and the Grande Ronde Rappellers. We collected data on firefighters to track changes in body composition and fitness over a fire season. Measures included VO₂ max, max strength tests, and power tests. Preliminary results suggest that the fire season leads to loss of muscle mass, cardiorespiratory fitness, and increased body fat. These results demonstrate the need to implement specific strength and endurance training protocols throughout the fire season in order to maintain peak physical performance, avoid injury, and maintain ability to perform tasks efficiently in the field.

Cheyenne CAMARA (See abstracts under Callie NORMAN and Brianna STAVAAS)

Cara CAMPBELL

Project Title: Literacy as Adaptation and as Gendered in Fan Fiction

Type of Presentation: Talk

Presentation Time: 11:30 am

Faculty Sponsor: Cori Brewster

Abstract: This presentation shows how fan fiction is a unique example of literacy as adaptation and literacy as gendered. Using scholarly sources, an argument is made that gender has a significant role in fandom, including in fan fiction. Scholars of fandom have argued that men tend more towards totemic fandom, in which the fan internalizes the original work as part of their identity and can consider

modifications to it to be a threat, while women tend more toward transformative fandom practices, in which the source material is re-worked. These gendered differences in fandom are likely a result of a variety of social factors, including patterns of inclusion and exclusion in media; the presentation argues that fan fiction represents an adaptive form of literacy that arose from this particular social context.

Tony CAPPS (See abstract under Christa TRYON)

Curtis CARSON

Project Title: Musical Composition

Type of Presentation: Performance

Presentation Time: 1:15 pm

Faculty Sponsor: John McKinnon

Jessica CARTER

Project Title: Characterization of DNA aptamers for sensor development

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Anna Cavinato

Abstract: Our research efforts focus on the development of diagnostic sensors, specifically for bacterial detection. The sensor idea is based on DNA aptamers which are artificial, single-stranded DNA molecules typically shorter than 100 nucleotides. Aptamers continue to be widely used for analytical detection and diagnostic applications as they display the ability to bind and therefore identify specific target molecules with very high selectivity. Aptamers were selected from a very large, random pool through a process called Systematic Evolution of Ligands by EXponential amplification (SELEX) assisted by graphene oxide. Specifically, aptamers were identified with potential high affinity to p57 or Major Soluble Antigen (MSA). This protein is the principal antigen found on the surface of Renibacterium salmoninarum responsible for bacterial kidney disease in salmonids. The aptamer pool was developed to target the R2c sub construct from region 2 of the protein which contains a putative DNA-binding domain and therefore is believed to be a good binding site. Following sequencing, several aptamers were identified as potential candidates for sensor development application. Binding assays are in progress to determine their affinity to the R2c site.

Riley CARTER (See abstract under Austin WINEGAR)

Berenice CHAVEZ

Project Title: Art Major Open Studios

Type of Presentation: Exhibit

Presentation Time: 11:00 am – 1:00 pm

Faculty Sponsor: Michael Sell

Abstract: Students from the Art program will host an exhibition and open house in the Ackerman Senior Art Studios Annex. Visitors will have a chance to see seniors working in their studios as well as engage directly with the artists.

Junior Art major Berenice Chavez uses black and white film to create portraits that illuminate and reveal hidden cues conveyed by body language. In her modernist-styled photographs, Chavez captures how the

placement of hands on the body conveys different emotions and narratives.

Ana Gabriela CISNEROS-GONZALEZ

Project Title: Governance in Intimate Relationships in Disability

Type of Presentation: Talk

Presentation Time: 11:30 am

Faculty Sponsor: Jennifer Puentes

Abstract: There has been a limited amount of inquiry into the experience of intimate relationships people with cognitive disabilities have. This research details the interest and relevance of intimate relationships in the lives of people with disability, while creating an outlet for both the experiences of caregivers (people with no disabilities that work with people with disabilities) and people with disabilities (people with disabilities) through in-depth interviews to gather data on relationships in state-regulated programs. I completed content analysis on the training materials and interviewed supervisors of state-regulated programs regarding intimate relationships and expression of sexuality. The importance of the care worker's view of relationships in disability is to gather observer's view of the facilitation or constraints faced by the people with disabilities. From the use of in-depth interviews I conducted with three people with cognitive disabilities, three care workers, and one employer, I found that stigma, citizenship, sexual education and obstacles are a part of the governance of relationships in disability.

Kolton COBB

Project Title: Heart Rate Variability in Relation to Performance Predictability

Type of Presentation: Talk

Presentation Time: 9:15 pm (Opening Session Keynote)

Faculty Sponsor: Kyle Pfaffenbach

Abstract: Heart Rate Variability (HRV) is defined as differences in time between heart beats over the course a minute. A greater HRV is associated with a relaxed and non-stressed state, where as low HRV is associated with a stressed state. As such, HRV is being used as a biofeedback tool to track stress and the effect of mindful breathing. However, less is known about the predictive capability of tracking HRV in the context of heavy training. Research would suggest that athlete's heart rate variability can predict a number of things such as the onset of illness or fatigue. Thus, the purpose of this study was to measure in eight track and field athletes for a period of twenty minutes, once a week, and test whether this measures provides us enough insight to predict performance subsequent performances. The athletes HRV will be measured the same time every week but at different days of the week for each athlete. Results will be compared to performances in track meets the spring 2018 outdoor season.

Kolton COBB (See abstract under Briton HANSEN)

Kaley COPE

Project Title: Community Involvement with Cook Memorial Literacy Center

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Cori Brewster

Abstract: Literacy is directly tied to discrimination and power, as it interweaves itself into our everyday lives. Literacy has been observed as a developmental process that begins before birth and never ceases to progress, and the La Grande Cook Memorial Library Literacy Center is one effort to nurture that development. As an established community and university, we need to utilize the resources we have to better our children’s early literacy development. The Literacy Center is one accessible tool for all families that combats discrimination through literacy and empowers students through the use of language. This poster session will present the results of our volunteer experiences within the Literacy Center as well as provide an insight into the benefits of community and University involvement that will foster literacy development, skills, and knowledge expanding from youth to maturity.

Nicolas CORSINI (See abstract under Erica NADERMANN)

MeeMee CROSSLER-LAIRD (See abstract under Paige NAVRATIL)

Clayton CUNNINGHAM (See abstract under Erika LAVADOUR-YOHE)

Robie DAVIS (See abstract under Joel JACOBS)

Jagdeep DEOL (See abstracts under Rosalie SALISBURY, Makensie FORSYTH and McKaden MANDERBACH)

Greg DOMBEK (See abstract under Justin HUGHES)

Quentin DURFEE (See abstract under Callie NORMAN)

Emily ELSNER (See abstract under Trace FLOREK)

Michelle EPPS

Project Title: Population Dynamics of Columbia Spotted Frogs

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Laura Mahrt

Abstract: Columbia Spotted Frogs (*Rana luteiventris*) are dispersed throughout the Pacific Northwest with areas experiencing declines in numbers. Major factors contributing to their loss include: modification to habitat, chytrid fungus, climate change, and introduction of non-native aquatic species. Declining populations has led to this species to be listed as a sensitive species in Oregon. The frogs like to lay eggs in cold, quiet waters. Approximately 50 years ago, McCoy Creek was canalized. From 1997-2002, McCoy Creek has been under active restoration to restore the creek’s original path. The old channel was dammed and a series of new ponds were established. During the 2003 breeding season, the frogs began exploiting

5 of the 12 new ponds. Currently, the frogs are utilizing 10 of the 12 ponds with a total of 117 egg masses observed this year. From the data, we have been able to calculate the area's carry capacity at 157 females.

Michelle EPPS (See abstract under Margaret McCLEAN)

Maria FINN (See abstract under Emily SPINDEN)

Trace FLOREK

Project Title: Effect of an After School Physical Activity Program on Self-Esteem

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Kelly Rice

Abstract: Low self-esteem in adolescence has shown to be associated with bullying, being bullied, drug and alcohol abuse, eating disorders, drop outs, teenage pregnancy, crime, violence, aggressiveness, and low academic achievement. Physical Activity (PA) increases adolescent's self-esteem and decreases the chances of unhealthy behaviors. Purpose: The purpose of this study is to measure whether an outdoor after school activity program increases self-esteem in rural adolescence. Methods: A Get Outside-After School Activity Program (GO-ASAP) is a 20 week (2x week/120-150 mins) aimed at increasing the PA and self-esteem. Self-Esteem survey, pre, and mid results of self-reported self-esteem were taken at weeks 1, 10, and 20. The survey was based on a 4 point Likert scale and the answers to the questions were totaled out of 30. Results: Participants average age was 14 +- 0.864. The sample sizes were 19 pre and 13 mid. Pre to mid mean and SD was pre =21.5 +- 5.3 and mid = 16.7 +- 6.0. No significant results were observed. Conclusion: Though PA has been shown to increase self-esteem, a larger sample size and longer study is needed to see the effect of an after school activity program.

Trace FLOREK (See abstract under Ben TELLERIA)

Makensie FORSYTH

Project Title: Potential Hunting and Nesting Habitat for Short-eared Owls in and around the Ladd Marsh Area

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Karen Antell

Abstract: We participated in a citizen science project for the 2018 Western Asio flammeus, Short-eared Owl, Landscape Study (WAFLS). Robert Miller, staff member of the Intermountain Bird Observatory, coordinated this project which was spread over eight western states to see how frequently owls were sited in suitable habitats. We completed three surveys on Ladd Marsh Wildlife Area in La Grande, Oregon searching for short-eared owls, but none were detected. A pair of owls were discovered in a shrub-grassland habitat near Ladd Marsh. We compared the site the owls selected this year with other areas they have been seen previously. We concluded that some areas of Ladd Marsh may be too wet for short-eared owls to nest.

Makensie FORSYTH (See abstracts under Rosalie SALISBURY and McKaden MANDERBACH)

Cassidy FREEDMAN (See abstract under Erika LAVADOUR-YOHE)

Madisen GARLIE

Project Title: Costly Colours Card Game Analysis

Type of Presentation: Talk

Presentation Time: 11:30 am

Faculty Sponsor: Amy Yielding

Abstract: In this talk I will analyze a variation of Cribbage called Costly Colours as described in the book *Compleat Gamester* written by Charles Cotton in 1674. This game was mainly played in Europe in the 1600's. I was mainly interested in different strategies of the game especially how to prevent the opponent from scoring during "pegging." Another component of the game I wanted to discover was the expected value of a single hand. I will analyze possible defensive strategies as well as expected values of a given hand. This research was completed as part of my senior capstone project for my Mathematics degree.

Sally GEE (See abstract under Christa TRYON)

Meredith GEISSINGER

Project Title: Decline of Long-Billed Curlew Breeding Populations in Converted Agricultural Land in Eastern Oregon

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Karen Antell

Abstract: Research on converted agricultural land contributing to the loss of breeding and nesting grounds of Long-billed curlews was conducted in the Blue Mountains of Eastern Oregon to determine how agriculture has affected breeding and nesting of these birds. The Long-billed curlews nesting sites are historically wet grasslands and have been significantly impacted by the use of that habitat for agricultural purposes, causing a decline in their presence in Oregon. It was hypothesized that the increasing use of grassland for agriculture is a direct loss of nesting habitat for Long-billed curlews. The data on the populations of Long-billed curlews was obtained from a Citizen Science survey project recording the number of short-eared owls in the western states, completed by volunteers. To conduct the survey, a predetermined 5-mile grid was provided. We stopped to observe every half a mile which consisted of watching and listening for specific birds and their behaviors which were documented. On the Alicel grid, eight Long-billed curlews were recorded. We found that the numbers of Long-billed curlews in Eastern Oregon, Washington, and California have specific areas where there were previously high in their numbers, but in recent years, agriculture has caused a decline in their ability to nest and breed.

Meredith GEISSINGER (See abstracts under Rosalie SALISBURY, Makensie FORSYTH and McKaden MANDERBACH)

Tayton GERLACH-DUBY (See abstracts under Rosalie SALISBURY, Makensie FORSYTH and McKaden MANDERBACH)

Meagan GHINTER

Project Title: The Chameleon Effect and its Influence on Levels of Likeability

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Marie Balaban

Abstract: The chameleon effect refers to non-conscious mimicry of one's interaction partner. Previous researchers have explored the relationship between the mimicker and mimicked, whether a participant engages in mimicking, and the impact of mimicking on both the mimicker and mimicked. Research suggests that the chameleon effect correlates with high levels of self-esteem, engaged behavior, and prosocial behaviors. However, little research has been done on how mimicking impacts levels of likeability and positive social behaviors during an interaction. The purpose of this study was to examine those effects when a participant was mimicked. Thirty participants were randomly assigned to either the mimicked or the non-mimicked condition. During the experiment, participants were videotaped to assess behavior. Two independent coders scored each participant using a scale of consistent positive and negative behaviors. Results showed significantly more positive social behaviors in the mimicked condition than in the non-mimicked.

Meagan GHINTER (See abstract under Emily SPINDEN)

Madeline GIANANDREA (See abstract under Brianna STAVAAS)

Dakota GORDON

Project Title: Man-Eater: Algonquian Windigo Violence

Type of Presentation: Talk

Presentation Time: 10:30 am

Faculty Sponsor: Ryan Dearing

Abstract: Throughout the past century, scholars have attempted to understand Algonquian windigo customs as they pertain to the native peoples of Northeastern Canada. However, limited consideration has been given to the significance of those beliefs as Algonquians struggled for control over their spiritual practices. This essay explores the role that violence played in relation to famine, cannibalism, windigo prevention killings, and Canadian jurisprudence. Furthermore, it looks at violence as an avenue for cultural struggle. By researching the known historical windigo cases, a clear picture of struggle emerges. Algonquians were violent out of compassion and custom whereas Canadian authorities used violence to subjugate Algonquians and admonish their cultural beliefs. Moreover, Canadian authorities utilized extreme measures that were neither legal nor moral. Past scholarship, such as Teicher's work on *Windigo Psychosis* and Marano's functional approach, illustrate where previous scholars have faltered with Algonquian windigo research. New avenues of scholarship have allowed historical scholars to utilize contemporary lenses and bring a more fulfilling, Algonquian voice to the subject.

Dakota GORDON (See abstract under Neil HETRICK)

Bailey GREGORY (See abstract under Meagan GHINTER)

Briton HANSEN

Project Title: Familial Relationships of Oregon and Nebraska *Chrysemys picta bellii*

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Joe Corsini

Abstract: *Chrysemys picta bellii* (the Western Painted Turtle) is a familiar inhabitant of ponds and lakes in the western United States. Our goal for this project is to make familial comparisons between populations of Painted Turtles from Nebraska and local Painted Turtles from Ladd Marsh, that in order to better understand historical migration patterns of these animals. An established method for comparing familial relationships in a population of animals, or genetic variation between sub-populations of a species, is DNA sequencing of the non-coding region of the mitochondrial DNA (mtDNA). DNA sequencing involves three stages: 1) extraction of DNA, 2) amplification of DNA, and 3) DNA sequencing. We first developed an economic technique to grind the turtle shell bone to a fine powder, then we used a Quiagen tissue extraction kit to perform the DNA extraction on six Nebraska specimens and two Oregon specimens. Following extraction, the non-coding region of mitochondrial DNA was successfully amplified via PCR in preparation for the final stage of the process, the actual DNA sequencing. Sequencing of this DNA has not yet been attempted but will in the future allow us to assess relationships between these turtles.

Matthias HERRMANN (See abstract under Callie NORMAN)

Neil HETRICK

Project Title: Oregon East

Type of Presentation: Panel

Presentation Time: 12:30 pm

Faculty Sponsor: Jodi Varon

Abstract: In examining a lifetime we occasionally recognize a sort of thematic emergence. We may keep in mind that the themes we recognize are often colored by the lenses of age and time through which we look. The looking is still valuable, and past issues of Oregon East provide a glimpse of the values of students at Eastern Oregon University over the years. There are hopes and dreams and loss and images of humanity recognizable at any point in history. There are writers and artists that strive to capture the simple and complex majesty of lives and share a piece of themselves with an audience. Oregon East, the student literary and arts magazine, provides a chance for readers to regard the monumental efforts of students at our university. This year, Oregon East would like to provide a "sneak peek" into our upcoming 2018 anthology issue spanning the past 30 years of Eastern Oregon University's creative written works. This presentation will feature readings from authors whose work has been featured in Oregon East as well as discussion of the creative inspiration behind these works.

Matthew HOPPE (See abstract under Brittany PETERSON)

Eli HOLEMAN (See abstract under Brianna STAVAAS)

Carissa HUGHES (See abstract under Christa TRYON)

Justin HUGHES

Project Title: The effects of caffeine on muscle output and cognitive function

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Kyle Pfaffenbach

Abstract: Caffeine is a popular and legal supplement used for performance enhancement across a variety of sports. The performance enhancing effects of caffeine in endurance athletics and alertness are well established. However, less is known regarding the effects of caffeine on precise muscle force production as well as brain function. Therefore, in this project we examined the effect of two commercially available caffeinated supplements on muscle force production in collegiate football players. The two supplements used were Redbull "energy drink"™ and Spark by Advocare. Each subject consumed both caffeine containing products on separate testing days. Caffeine was administered at 3.5mg/kg body weight, which has shown to be safe and effective. On each testing day, subjects arrived in a fasted condition, performed baseline muscle power and a cognitive test, drank the supplement, and then performed the same tests 90 minutes after supplement ingestion. Muscle power was measured using a Biodex Dynamometer, which is a machine that directly measures muscle force production through range of motion. The results of these measurements allow us to compare the effect of caffeine on muscle force production as well as aspects of cognitive function.

Taylor HUNT

Project Title: Clique Graph Origins

Type of Presentation: Talk

Presentation Time: 11:00 am

Faculty Sponsor: Amy Yielding

Abstract: In this talk we discuss findings of the EOU Math Summer Research Group where we studied topics in graph theory, in particular we examined a family of graphs we coined clique graphs. We will discuss how to use to utilize the zero forcing number, derived from a zero forcing set, to establish a bound on the minimum rank of our clique graphs. From which we find the inertia tables for clique graphs of cycles, paths, stars, and complete graphs.

Taylor HUNT (See abstract under Joel JACOBS)

Joel JACOBS

Project Title: Circle Packing Stuff

Type of Presentation: Talk

Presentation Time: 12:30 pm

Faculty Sponsor: Amy Yielding

Abstract: Circle packing is a subset of mathematics that involves placing the largest diameter and number of circles within a given shape. Circle packing has a variety of applications such as determining box size for shipping by warehouse sites like Amazon. This presentation presents an introductory look at circle packing along with some optimal packings of circles in common shapes. This work is part of the capstone for the math degree at Eastern Oregon University.

Joel JACOBS**Project Title:** Clique Graphs Reloaded

Type of Presentation: Talk

Presentation Time: 10:30 am

Faculty Sponsor: Amy Yielding

Abstract: In this talk we introduce a new family of graphs we coined clique graphs, denoted KG. We then discuss results found relating minimum rank, clique covers, and inertia of a KG for any simple connected graph G. In particular we provide a criteria for G which results in the inertia table of G is contained within the inertia table of KG. This research was done as part of the 2017 EOU summer mathematics research group.

Joel JACOBS**Project Title:** Isolation of Pyrrolizidine Alkaloids from *Arnebia pulchra*, *Omphalodes verna*, and *Lindelodia anchusioides*

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Ron Kelley

Abstract: Pyrrolizidine alkaloids (PA's) are potentially toxic, naturally occurring, secondary products that are typically found in the plant family Boraginaceae. In this study, we examined garden grown populations of *Arnebia pulchra*, *Lindelofia anchusioides*, and *Omphalodes verna* to re-evaluate published literature results utilizing GC-MS and NMR instrumentation. Findings from the 1950's and 1960's of these plants demonstrated the presence of novel PA compounds, such as macrotomine and lindelofine. Each of these plants possess saturated pyrrolizidine alkaloids whose ring stereochemistry was proposed without the benefit of modern instrumentation. The current analysis will focus on NMR experimentation to ascertain the relative stereochemistry of these alkaloids.

Joel JACOBS (See abstract under Taylor HUNT)**Ryan JAGGI****Project Title:** Track & Field Vo2 Testing

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Kyle Pfaffenbach

Abstract: Lactate threshold, heart rate and maximum oxygen uptake (VO₂) are key factors in overall fitness for endurance athletes. Lactate threshold, heart rate, and VO₂ max were all tested on 6 of the Eastern Oregon's track and field distance team members, 2 women and 4 men. The subjects performed a running test on a treadmill using a set speed at 6.5 mph for women and 8 mph for men, with a increasing incline throughout the test. While the athletes ran, they wore a heart rate monitor, as well as a breathing mask attached to a machine that measured oxygen uptake. Blood samples were taken for blood lactate on average 3 times per test. Each athlete responded differently to a relativity same workload. The results showed that half of the men tested are capable of holding higher heart rates for a longer period of time for a given workload. This would indicate that their training program can be angled toward higher intensity workouts to get the most adaptation from their training. These tests gave insight into what kind of training adaptations can be made for individualized training programs.

Allyson JOHNSON

Project Title: Dissecting Saints: Medicine During the Protestant Reformation

Type of Presentation: Talk

Presentation Time: 2:00 pm

Faculty Sponsor: Ryan Dearing

Abstract: This project examines the various ways in which Protestants broke away from typical medical practices and how Catholics responded to the changes that occurred during this period. Today's presentation will focus on the process of canonizing saints. After the Reformation, the Catholic Church changed the process of canonization to include medical expertise. However, this change did not prevent criticisms from Protestants who believed venerating saints was idolatrous. Using examples of canonization trials from before and after the Reformation, the presentation will explain what changes occurred, but will also look at works by John Calvin to show how Protestants viewed this practice. Although Paracelsus was not a Protestant, his writings on saints will also be included, as many of his followers were Protestants. I argue that while Paracelsus may not have identified himself as a Protestant, his views on saints aligned with those held by Protestants rather than those held by Catholics.

Lena JOHNSON (See abstract under Joel JACOBS)

Randi JOHNSON

Project Title: Daughter of the Desert

Type of Presentation: Talk

Presentation Time: 10:30 am

Faculty Sponsor: Nancy Knowles

Abstract: Daughter of the Desert is a talk that will explore the origins and modern forms of cowboy poetry. Based in oral storytelling, cowboy poetry is a prominent art form in ranching areas. Cowboy poetry is a way for the men and women of the ranching world to record and share their joys, sorrows, and dreams through writing. These poems encompass topics from natural disasters, local and national politics, faith, horses, dogs, cattle, rodeo, patriotism, community, humor, and rodeo. During this talk I will recite poems I have written that cover the topics of family, rodeo, horses, and pride in our nation and the cowboy lifestyle.

Nicholas JONES

Project Title: Sweep-Net Surveying of Insects on Ladd Marsh, Union County, Oregon

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: John Rinehart

Abstract: Many methods are currently available to survey insect fauna. One method particularly useful for capturing herbivorous insects is sweep netting, in which a large amount of material can be gathered and sorted in a small amount of time. We sweep netted three diverse locations on Ladd Marsh in August 2017 and sorted insects present in the samples. We find a great diversity of species that differ dramatically based on the environment and flora of the location. We present here quantitative data regarding types and numbers of insects found and compare the fauna present based on the location of the sweep sample.

Nicholas JONES (See abstract under Brianna STAVAAS)

Ashton KAZMIERSKI (See abstract under Jordan SHAW)

Callie KREWSON (See abstract under Callie NORMAN)

Zachary LACEY

Project Title: Climate Change and the Impact on Flood Insurance

Type of Presentation: Talk

Presentation Time: 12:00 pm

Faculty Sponsor: Amy Yielding

Abstract: Many adults every year find themselves committing to a 30 year loan for a home. Not only will you have to pay back a six figure plus loan to a bank, but while the house is still under borrowed money you may also have to purchase flood insurance. It is not unusual for a house in certain flood zones to pay around \$2,000 a year in insurance. That is potentially an extra \$60,000 over the life of a mortgage. The current and possible rise in flood insurance could be a result of climate change. In this talk, I discuss a regression model to predict loss dollars paid for insurance companies from future flood damage, using the Actuary Climate Index. Discussing further how such factors are affecting the actuary rate formula. This is part of the capstone for a mathematics degree at Eastern Oregon University.

Carrie LAURENCE

Project Title: Reducing Workplace Stress with Meditation

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Kelly Rice

Abstract: According to the American Psychological Association more than one-third of workers surveyed are experiencing chronic stress related to work. Meditation provides an opportunity for individuals to respond to stress, while also benefiting from its positive physical and mental effects. The purpose of this project is to utilize meditation as a tool to reduce stress among office workers. Nineteen volunteer participants will complete a four-week mediation program that includes a minimum of three sessions per week, at least 15 minutes in length. Participants will keep a daily log to track their meditation frequency, as well as a brief description of how they felt before and after meditating. Each participant will also complete a pre- and post-program assessment. A control group of five non-participants will complete the pre- and post- assessment only. These methods will provide ongoing data through all stages of the program that can be used to evaluate the effectiveness of a consistent meditation practice on workplace stress levels. This program will implement and measure the effectiveness of meditation on the primary objectives of reducing workplace stress and increasing participants control over their stress response.

Erika LAVADOUR-YOHE

Project Title: Residual Macrolide antibiotic concentrations found in the kidney tissues of hatchery fish

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Anna Cavinato

Abstract: Antibiotics are commonly administered to fish raised in hatcheries to treat or prevent infectious diseases. The Oregon Department of Fish and Wildlife (ODF&W) would like to use carcasses of spawned fish as nutrients along the banks of rivers. However, there are no data that demonstrate that the injected antibiotics are completely depleted by the time the fish is placed in the environment. In this study, we

developed a method of analysis to determine the concentration of macrolide antibiotics such as erythromycin and tulathromycin in fish tissues based on liquid chromatography with UV detection (LC-UV). The method will be utilized to conduct depletion studies in salmon. Tissues from fish injected at varying intervals of time will be analyzed to determine how long it takes the antibiotics to be completely depleted. If successful, this will become an ongoing study that will involve hundreds of samples from a large population of fish from surrounding hatcheries.

Audrey LIND

Project Title: Art Major Open Studios

Type of Presentation: Exhibit

Presentation Time: 11:00 am – 1:00 pm

Faculty Sponsor: Michael Sell

Abstract: Students from the Art program will host an exhibition and open house in the Ackerman Senior Art Studios Annex. Visitors will have a chance to see seniors working in their studios as well as engage directly with the artists.

Audrey Lind, a junior art major, utilizes charcoal, watercolor, acrylic, paper, and thread to create reassembled collage creatures. Her interests involve exploring the difference between humans and other animal species, and challenging the assumed superiority of humans. Pairing human body parts with those of animals aims to minimize these perceived differences.

Hannah MABBOTT

Project Title: Plan4Health and The Oregon Department of Fish and Wildlife; A proposal and collaboration

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Kelly Rice

Abstract: The proposed project created by Hannah Mabbott is one that combines two important factors in life in Umatilla County, that of the necessity for better health and the love of the outdoors by the local community. The Plan4Health initiative is one that is a federally and locally funded project working towards bettering the health of the local community through better food and exercise programs. Though it has had successful projects thus far, the initiative strives to get a larger population involved in bettering their health. With over a...” of the entire county considered overweight or obese, the focus needs to be on activities that appeal to people of all sizes that will be enjoyable in a way that does not seem like “boring” exercise. A partnership with ODFW may do this as teaching the locals to better their diets with lean proteins, fresh greens, berries, and mushrooms that the local environment provides comes at little to no cost. Holding workshops on how to forage, hunt, and fish will quickly teach how to use your own body to search for the foods that sustain it. Through contact with ODFW and Mr. Setzer, as well as many other community members, there is talk that this collaboration may very well become a success as it is combining two government bodies with a limited budget in a way that mutually benefits both. Proposals are in effect and will be reviewed by both parties before taking into effect once costs and time are factored. It is extremely important that the citizens of Umatilla County make their health a priority, and by providing the training necessary they could very soon be providing themselves with a bounty of local harvest that can easily sustain a family year round on a very low budget.

Michael MAHONEY (See abstract under Makensie FORSYTH)

McKaden MANDERBACH

Project Title: Short-eared Owl and raptor population surveys at Ladd Marsh and Alicel for the Western Asio flammeus landscape study

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Karen Antell

Abstract: Short-eared Owls have been declining in population in the United States for nearly 50 years, making them a species of great conservation concern. This study is part of a west-wide survey of Short-eared Owls to determine their breeding habitats and overall population numbers. While surveying for Short-eared Owls we also surveyed and counted any other raptors in the area. We were assigned two routes; the Ladd Marsh route and the Alicel route, which consisted of very different habitat and vegetation types. Both of these routes were five miles long and our research group stopped every half mile for five minutes to observe for any Short-eared Owls or other raptors. Each route started 90 minutes before civil twilight and ended at twilight. After completing each route three times we found that there were no short-eared owls on either route. However, there were a number of different raptors we found on both routes; Northern Harriers and Red-tailed Hawks were the two raptors that were spotted most often on each route. The number of Northern Harriers was always greater than the number of Red-tailed Hawks.

McKaden MANDERBACH (See abstract under Makensie FORSYTH)

McKenzie MANLEY

Project Title: Women's Wellness Program

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Kelly Rice

Abstract: The purpose of this program was to build social support for military members. **METHODS:** Women's Wellness Program (WWP) is a program designed to build social support with local female military members. The program met three times (February 17, March 10 & 24). Participants were gathered from the community through different media platforms. Assessments were used with surveys at the end of each session and were based on a 5-point scale. **RESULTS:** There were four age range categories (18-25, 26-32, 33-40, 41 & older). 1 subject was 18-25 range, 4 subjects were 26-32 range, 4 subjects were 33-40 range, and 2 subjects were 41 and older range. 9% of the subjects were active military members, 18% veterans, 36% spouse of active, and 36% spouse of veterans. 9 subjects reported "very likely" to participate if the program expanded, the 2 subjects reported they were "likely" to participate. 100% of subjects reported increased happiness after each activity. **CONCLUSION:** The results are limited due to the inconsistencies of participation. Although participation was low for this program, there was a high amount of interest.

Miranda MANLEY

Project Title: "The Gilded Highway to Hell"; Brothel Prostitution as a Carnival Mirror Reflection of Victorian Gender Ideology.

Type of Presentation: Talk

Presentation Time: 12:00 pm

Faculty Sponsor: Ryan Dearing

Abstract: The Victorian ideology of True Womanhood was largely based on ultra-feminine ideals regarding women as pious, pure rulers of the domestic sphere. Thus, during much of the nineteenth century prostitution was accepted as a necessary evil to save virtuous wives from excessive demands for sex, as men were not expected to endure fidelity or chastity. Brothel prostitution would seem to have little in common with middle-class domesticity, but in reality the ultra-gendered ideals of the Victorian age seeped into many aspects of brothel practices. This presentation will highlight one particular aspect, the ways in which Victorian mores surrounding pregnancy and motherhood were reflected in the health practices of brothels. Utilizing the research of historians and archaeologists alongside personal letters and medical advice, I will discuss the various methods employed by prostitutes to prevent pregnancy, as well as the outcomes when such measures inevitably failed. I argue that although it would seem that brothel prostitutes had no place within the middle-class rankings of True Womanhood, the cult of domesticity permeated the functionality of brothels, resulting in a carnival mirror reflection of decent society.

Margaret McCLEAN

Project Title: Oviposition Location of Columbia Spotted Frogs (*Rana luteiventris*) in Northeastern Oregon

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Laura Mahrt

Abstract: The location of *Rana luteiventris* (Columbia spotted frog) egg masses has been monitored at the restored McCoy Creek for 19 years. The locations of the ovipositioned communal egg mass sites have been recorded and compiled to determine the optimal location for decreased egg mass morbidity and mortality. The McCoy Meadow site was surveyed three times a week throughout the month of April to record the location and number of new *R. luteiventris* egg masses. We found that the masses were located in the shallow, highly vegetated edges of the pond. Using these findings, restoration projects can be improved to allow more suitable laying sites for *R. luteiventris*. The data will be used to aid in improving the restoration of spotted frog habitats, to optimize population.

Margaret McCLEAN (See abstract under Michelle EPPS)

Natalie MITCHELL (See abstract under Anna ROSLANDER)

Yasmin MOOKERDUM

Project Title: Mini Mounties Soccer Camp

Type of Presentation: Talk

Presentation Time: 12:00 pm

Faculty Sponsor: April Curtis

Abstract: This project focuses on event planning and marketing. There are many elementary aged girls in the union county district that have a love for soccer and enjoy playing it. With this in mind, a children's

soccer camp for girls in 4th to 6th grade was created with the intent of them to further develop their skills and have fun. The camp was then marketed to the wider community and a detailed schedule of drills and games was created. Scheduling the event itself proved to be the most challenging task throughout the entire process. This presentation will discuss the steps involved in both the event planning and marketing process. It will include visuals from the camp which is scheduled May 19th.

Ashlee MULLER

Project Title: Run Girl Run Program: To help increase physical activity and improve body image

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Kelly Rice

Abstract: Introduction: With the rise of social media and technology, youth have become at risk for negative body image, possibly leading to other health related issues. Such as, social/societal pressures, poor diet habits, and negative body image/lack of self-acceptance. Methods: 9 to 12 years old girls (4th-5th grade) were recruited from Central Elementary through classroom visits. Run Girl Run is an 8-wk program, meeting 2 X/wk for 90 min/session. 19 girls signed up for the program aimed to encourage physically active, healthy life choices, improve self-efficacy, and body image. The girls filled out a 5-point Likert scale survey about body image, social media and societal pressures, and diet habits. Pre-test survey was distributed during wk1. Surveys will also be given at the end of the program. Results: Mean and Standard Deviation scores are as follows; general body image (49 possible) (34.2 3.88), personal body image (11 possible) (7.62 2.42), media/societal pressures (21 possible) (13.25 4.05), and dieting habits (17 possible) (13.68 2.54). Conclusion: A 8-week Run Girl Run program may be an effective way to increase self-efficacy, and body image in 9-12-year-old girls.

Ashlee MULLER (See abstracts under Bailey WEINKE and Cassidy WATKINS)

Uwase (Nadine) MUSEKURA

Project Title: Refugee Helping Refugees

Type of Presentation: Talk

Presentation Time: 10:30 am

Faculty Sponsor: Jennifer Puentes

Abstract: There are about 65.6 million refugees in the world yet refugee populations are underserved with the insufficient amount of resources. This study examines the existing refugee programs that help refugees adjust to their new environment. Previous literature indicates that refugees struggle with different challenges such as mental illness, culture barriers, and stigma. The purpose of this study is to provide a foundation data to create programs that will help refugees adjust in a non-traumatic way. I examine in what ways the stigma attached to mental illness throughout different cultures affect refugees' willingness to participate in mental health programs available through the government and nonprofit organizations. In this study, I conduct interviews with ten refugees from the age of 20 to 25 from different States through social media and surveyed high school students from the age of 14 to 18 in an urban environment in the Pacific Northwest. Through all of these interviews and surveys, I identify additional supports that may help refugees adjust to their new environment. Implications for future improvements to refugee programs are discussed.

Erica NADERMANN

Project Title: Diatoms of Hot Lake in La Grande Oregon

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Joe Corsini

Abstract: Hot Lake is a natural hot spring near in La Grande, OR. Temperature varies in the waterway, reaching 98 degrees celsius in its warmest regions. We sampled at the cooler regions of the hot springs near the outflow into Ladd Marsh with the aim of characterizing the variety of diatoms in Hot Lake. Diatoms are single-celled photosynthetic organisms that live in fresh or marine water. They are photosynthetic and produce siliceous (silica based) cell walls called frustules. In the two samples from the cooler regions we were able to identify: Fragilaria species, Nitzschia species, Cylindrotheca species, Stauroneis species, and Rhopalodia gibba. We have also discovered a number of other interesting organisms such as the single-celled cercozoan Euglypha, and a rotifer in the genus Lecane.

Thaine NAKASONE (See abstract under Nicole ALMANZA)

Paige NAVRATIL

Project Title: The Effect of Emotions on Altruism

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Marie Balaban

Abstract: Research suggests that emotions induced through media will help influence an individual's behavior to be altruistic or self-benefiting. Recently, social media has become a predominant resource that many people utilize. Social media is being used to influence the way humans interact. There was a lack of research done with visual media; therefore, we chose to manipulate participants' behaviors through visual media because of the influx in use of these platforms. The purpose of this study was to examine the effects of emotion-inducing visual media on altruistic behaviors. The study included 32 undergraduate students who watched a video to induce either confidence or empathy and answered brief questionnaires. The results showed that there was a change in self-reported scores on current emotional states, but no difference in choice to be altruistic vs. self-benefitting.

Khadija NEUMEYER

Project Title: Kick Start for Head Start

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Kyle Pfaffenbach

Abstract: The majority of adult workers do not get enough exercise and consume an unhealthy diet. Given the well-established benefits of exercise and diet on mental health, physical health, and productivity, it is important for employees to be informed on making healthy decisions and to be encouraged to exercise and eat right. We have partnered with the Umatilla Morrow Head Start Office to provide weekly health and exercise information to their employees as part of an ongoing workplace wellness initiative. Each week we put together a weekly digest that was filled with infographics, videos, health information, and shout-outs for the staff at the Umatilla Head Start. We used previous survey data to guide our topic selection based on what employees wanted. We used participation as a motivational factor for employees that were exercising and providing us with positive feedback related to our current

weeks issues. We will follow up the distribution of the newsletters with a survey to measure the impact and usefulness of this approach at promoting health behaviors.

Callie NORMAN

Project Title: Hydroxylamine Reactivity with Heme Proteins

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Colin Andrew

Abstract: Hydroxylamine (NH₂OH) is a strongly reducing precursor to nitrous oxide (N₂O), a potent greenhouse gas formed by bacteria in soil and wastewater. Bacterial iron-containing heme proteins, including cytochrome P460 and hydroxylamine oxidoreductase, have been shown to play key roles in the oxidation of hydroxylamine. As a first step towards defining structure-reactivity relationships in hydroxylamine metabolism, UV-Visible absorption spectroscopy was used to characterize hydroxylamine reactivity with a range of mammalian and bacterial heme proteins in different redox states.

Callie NORMAN

Project Title: PCR-Cloning as an Aid to Clarification of Ambiguous DNA barcode Data

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: John Rinehart

Abstract: DNA barcoding is a well-established and usually accurate method of identifying an animal to species. It is particularly useful with Arthropod taxa in which species may be difficult to distinguish based on morphological methods. Because the method depends on the Polymerase Chain reaction (PCR), it is very sensitive to contamination as well as to poorly prepared or preserved source material. Moreover, if DNA is extracted from an entire specimen, gut contents and/or Eukaryotic gut endosymbionts may also amplify in the process. Here, we couple PCR-cloning to the barcoding method to isolate individual barcode sequences as clones. Because each clone represents a single unique instance of the barcode sequence from a specimen, it allows unambiguous identification of the source of the barcode, potentially eliminating the problem of contamination as well as identifying interesting aspects about the animal's physiology and ecology.

Callie NORMAN (See abstract under Brianna STAVAAS)

Kellie NOSTRANT

Project Title: Family Weekend Capstone

Type of Presentation: Talk

Presentation Time: 1:00 pm

Faculty Sponsor: April Curtis

Abstract: My project is a capstone for my major in Communication Studies. For my capstone I am interning for Le Bailey in the Center for Student Involvement and am coordinating the annual Family Weekend. Specifically I am coordinating communication for all clubs, organizations and attendees for the event. My project will take place over course of two Family Weekend events the first of which I coordinated multiple events during the weekend and researched the success of the Family Weekend event in order to improve upon it for the next year. As I am not completely done with my project the preliminary results suggest that weak lines of communication have existed between all of the groups

involved in the weekend, as well as between the university and the students and parents of students. Weak communication has resulted in limited success for the event. My projects is significant because I am attempting to create a fun and successful event that is attractive to students and their families and creates a strong, bonding tradition at Eastern Oregon University.

Blake O'DONNELL

Project Title: May Madness

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: April Curtis

Abstract: The sole purpose of my capstone is to generate some fundraising money for EOU men's basketball while testing my future business. This capstone is a perfect opportunity to get started with it. I will be hosting a 3v3 Basketball Tournament in Quinn. I will need to find sponsors, create advertisements, form brackets, collect and seek donations for raffle, organize raffle, and collect the documents needed for people participating so players are covered from insurance in case of injury. I will be charging for the event and will collect and organize all data to be present at the Spring Symposium. My date reserved for gym is May 27th, after the Spring Symposium, however I will be as ready as can be for the date.

Elizabeth OLSEN (See abstracts under Margaret McCLEAN and Michelle EPPS)

Jorden PAYNE

Project Title: Starting Government Contracts and How to Receive A Loan

Type of Presentation: Talk

Presentation Time: 12:30 pm

Faculty Sponsor: April Curtis

Abstract: My project was hosting a class where business owners could learn about government contracting and the resources they can use to build their business. I contacted a lot of businesses and state agencies that could assist and help teach business attendees. The class was successful and was a good opportunity for business owners to expand their business

Emily PAZ

Project Title: Social Cognitive Theory in Adolescents through the Get Outside After School Activity Program

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Kelly Rice

Abstract: Introduction: Physical activity plays an important role in healthy lifestyles. After school has been shown to be an important time for adolescent to develop healthy behaviors. Purpose: The study is to see how a non-competitive after school activity program (GO-ASAP) improved Social Cognitive SCT) variables in adolescents. Methods: GO-ASAP is a 20 weeks (2X/WK for 2/2.5 hr). Participants (pre-test=20, mid=14) completed a 45-item SCT survey validated by Dishman et. al 2004. The survey was given during week 1 (pre) and week 10 (mid). Results: Eight categories with M and SD for pre and mid respectfully: barriers self-efficacy (3.56, 3.46 +.87 p=.43), self-management strategies (3.19, 3.02 +1.01 p=.35), enjoyment of PA (1.90, 2.02 +.97 p=.43), perceived barriers (2.32, 2.18 +.77 p=.36), outcome expectancy value (3.70, 3.71 +.99 p=1.00), perceived importance of outcome expectancy (3.69, 3.63 +1.13 p=.71),

social support by friends (2.83, 2.44 +1.16 p=.17), and social support by family (2.82, 2.67 +1.01 p=.58)
Conclusion: The study needs to be further evaluated with a bigger population to have significant result.

Emily PAZ (See abstract under Ben TELLERIA)

Tanner PEARSON (See abstracts under Meredith GEISSINGER, Makensie FORSYTH and McKaden MANDERBACH)

Bobbie PENDLETON (See abstract under Anna ROSLANDER)

Brittany PETERSON

Project Title: Aptamer selection assisted by graphene oxide

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Anna Cavinato

Abstract: Our research efforts focus on the development of diagnostic sensors, specifically for bacterial detection. The sensor idea is based on DNA aptamers which are artificial, single-stranded DNA molecules typically shorter than 100 nucleotides. Aptamers continue to be widely used for analytical detection and diagnostic applications as they display the ability to bind and therefore identify specific target molecules with very high selectivity. We aim at isolating aptamers with high affinity to p57 or Major Soluble Antigen (MSA), the principal antigenic protein found on the surface of Renibacterium salmoninarum responsible for bacterial kidney disease in salmonids. Aptamers are identified from a very large, random pool through a process called SELEX. Specifically, we are targeting the R2c sub constructs from region 2 which contains a putative DNA-binding domain and therefore is believed to be a good binding site for aptamers. The current SELEX method has been modified to incorporate graphene oxide. This approach is based on recent findings that ssDNA can interact strongly via pi-pi stacking with graphene oxide sheets, making graphene oxide an excellent tool to help enrich pools of DNA with high affinity to the target and much increased efficiency. The method eliminates the use of affinity chromatography.

Peyton PLUCKER (See abstract under Charlette BURGHARD)

Kaitlyn REYNOLDS (See abstracts under Nicholas JONES and Brianna STAVAAS)

Katelyn RIDDER (See abstract under Trace FLOREK)

Taylor RHOTON (See abstracts under Joel JACOBS and Taylor HUNT)

Anna ROSLANDER

Project Title: Individualized off-season conditioning program

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Kyle Pfaffenbach

Abstract: The purpose of this study was to create an efficient, individualized off-season conditioning program for the Eastern Oregon University women's soccer team. Our goal was to create individualized programs to increase overall fitness while monitoring the possibility of overtraining and fitness declines

related to these programs. In order to analyze the strengths and weaknesses of each player, we required baseline testing to examine what program fits best for each player and what would get them to their peak performance. Tests were taken in areas of VO2 max, bench press, vertical jump and squats. We then tracked and analyzed how these athletes responded to a training program that was tailored for each athlete individually. This data will be able to help the athletes and coaching staff improve on areas that the athletes need to work on to enhance their performance on the field.

Kevin RUSSELL

Project Title: From State to statehood: How the Kingdom of Hawaii Became the Last State in the Union

Type of Presentation: Talk

Presentation Time: 11:00 am

Faculty Sponsor: Ryan Dearing

Abstract: “From State to statehood” is an exploration of the Hawaiian Islands as an oft-overlooked and misrepresented part of U.S. History at the high school level. The history of Hawaii is truly unique in its diversity of peoples and perspectives. This diversity allows for and demands that Hawaiian history is taught in an inclusive and honest way. This curriculum is designed as a three-week unit with 90 minute block periods. It will be accompanied by a historiographic and pedagogic analysis. Following applicable state learning standards, students will begin with the formation and settlement of the islands. Weeks two and three will focus on Hawaii as a Kingdom, territory, and eventually a state. Classes will follow a “flipped” approach in which students are not evaluated on homework. Rather they will have at home reading and research assignments to prepare them for class lessons and discussions the next day, where they will be evaluated based on participation. Students will be challenged to engage in interpretation of primary and secondary sources. These lessons are meant to be the inclusive, honest history I wish I had been taught as a young boy growing up in Hawaii.

Rosalie SALISBURY

Project Title: Western Asia flammeus Landscape Study

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Karen Antell

Abstract: 2018 Comparison of WAFLS and eBird sightings of Short-eared Owls in the Grande Ronde Valley: The Short-eared Owl is a raptor found in open-country habitats around the world. The ground-nesting species has in past years been experiencing a population decline. To learn more about the scope of the decline, a group of EOU students and faculty assisted a multi-state project called the Western Asia flammeus Landscape Study, coordinated by the Intermountain Bird Observatory. The objective of this study was to observe and document Short-eared Owl sightings. Two 5-mile routes in the Grande Ronde Valley were chosen and observed: Ladd Marsh and Alicel. The methodology used was to stop every 0.5 miles for a 5 minute period to scan for Short-eared Owls and any other raptors. While no Short-eared Owls were spotted on our routes, there were sightings of the species documented on eBird. eBird is website that allows community members and travelers to document their bird sightings. There was one Short-eared Owl sighting on the Ladd Marsh route, multiple sightings of two owls on Airport Lane in La Grande, and a sighting of 7 owls on Airport lane. The comparative data confirms that the owls move from year to year nesting in different locations.

Rosalie SALISBURG (See abstracts under Makensie FORSYTH and McKaden MANDERBACH)

Timothy (Garret) SAWYER

Project Title: Is race car driving a sport?

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Alysia Cohen

Abstract: The project surveyed online and on-campus students on their opinions of race car driving as a “sport and race car drivers as “athletes”. Is race car driving a “sport”? Three specific questions addressing race car driving were given independently then again with working definitions of “sport” and “athlete”. Respondents self-reported their weekly physical activity behavior. Students identified as an athlete (participation in 1 or more NAIA/recreational sports) or non-athlete. Initial response to the three survey questions found 71% agreed with the statement “Race car driving, such as NASCAR, is a sport”; 58.2% agreed “Race car drivers, such as those racing in NASCAR events, are athletes”; and 785% agreed “A race car driver’s physical fitness can affect his or her ability to perform in racing competitions.” No significant difference was found between the initial set of questions and repeated questions with the working definition of “sport” and “athlete”. By identifying current opinions of EOU students, we can better address misconceptions of race car driving, how racing is a team sport, and what it truly takes to be a competitive race car driver.

Jordan SHAW

Project Title: Personality and Team Cohesion in College

Type of Presentation: Panel

Presentation Time: 10:30 am

Faculty Sponsor: Brian Sather

Abstract: The purpose of this panel interview is to address how personalities in sport influence group cohesion and team chemistry. Group cohesion is defined as, “A dynamic process reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objective and/or for the satisfaction of member affective needs” (Carron, Brawn, & Widmeyer, 1998). Over the years, research shows that increased cohesion leads to greater performance and brings teams together. The reason for this study is to see how college coaches, or college players address the different personalities that need to work together to be successful. By interviewing successful coaches and former college athletes, we can identify some commonalities between the coaches and/or players. The research that will be carried out is selecting a panel of expert coaches and college athletes to talk about what they do to build group cohesion while handling different personalities, and then let members of the audience ask them questions as well.

Bailey SCHROEDER

Project Title: Heart Rate Variability as an Indicator of Dental Anxiety and the role of Meditation in reducing Dental Anxiety

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Kyle Pfaffenbach

Abstract: Heart rate variability (HRV) is a measurement of variation in beat-to- beat intervals that occur in heart rate. The variability measured in heart rate is due to the synergistic action of the

two branches of the autonomic nervous system (ANS). The ANS is the part of the nervous system that regulates a majority of the body's internal functions. There are many factors that can affect the activity of the ANS, therefore influencing HRV. Emotional stress, including emotions such as anxiety, can cause increased HRV. While stress and anxiety can increase HRV, focused breathing and meditation can improve coherence scores and ultimately decrease stress and anxiety. Many people suffer from dental anxiety. People fear going to the dentist due to perceived pain, noises, or the thought of the procedures. The purpose of this study is to use HRV to measure perceived stress and anxiety experienced by dental patients just prior to their appointments to distinguish if guided meditation before an appointment can increase coherence scores and lower anxiety. A control group will remain sitting in the lobby before their appointments and an experimental group will undergo guided breathing meditation using HRV as a guide to ultimately improve coherence score, therefore decreasing their anxiety.

Bailey SCHROEDER (See abstract under Joel JACOBS)

Adam SISSON

Project Title: Eastern Oregon University Athletic Community Involvement

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: Kyle Pfaffenbach

Abstract: Research suggests that the popularity of sports has increased over the last two decades, and that the total market revenue has almost doubled since 2005. Fandom is a major contributor to the success of sports programs amongst all sports of all levels, and is mainly responsible for the increase in sports related revenue. Many college and professional sports programs have created an environment that generates increased fan following and interaction. The purpose of this study is to examine and quantify data regarding the interest, popularity, and participation of La Grande, Oregon's community members towards Eastern Oregon University's athletic department. A survey consisting of a series of likert scale questions regarding the athletic department was provided across the local La Grande community. This presentation will discuss the perceptions and feelings toward EOU's athletic events, while searching for any disconnect between the community members and the university that has not yet been addressed.

Emily SPINDEN

Project Title: Prejudice Against Muslim Women

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Robert Butler

Abstract: Prejudice has been associated with various negative outcomes for individuals (Link, Cullen, Struening, ShROUT, & Dohrenwend, 1989). Muslim women are especially prone to being the targets of prejudice (Sirin, & Katsiaficas, 2011). Researchers suggest this might be due to the wearing of the hijab. Although important, some Muslim women do not wear the hijab. Therefore, understanding what other variables lead to prejudice is important. Two theories that can expand our understanding of prejudice are behavioral and labeling effects (Ajzen, & Fishbein, 2005; Link, et al., 1989). This study assessed if Muslim's religious behaviors or their label of being Muslim predicted prejudice. This information can be utilized to decrease prejudice and ameliorate its negative effects. Vignettes were used in which the behaviors and

label of Muslim were manipulated. Results supported that the Muslim label predicted prejudice scores. There was not a significant main effect for the impact of the behaviors. Implications, limitations and future directions are discussed.

Braden STAEBLER-SIEWELL (See abstract under Brittany PETERSON)

Haley STAMMEN

Project Title: Manifestos as a Form of Discourse: Rhetorical Analysis of Christopher Harper Mercer's "My Story"

Type of Presentation: Talk

Presentation Time: 11:00 am

Faculty Sponsors: Nancy Knowles and Cori Brewster

Abstract: In "Manifestos as a Form of Discourse: Rhetorical Analysis of Christopher Harper Mercer's "My Story,"" Haley Stammen's close reading of "My Story" offers insight into the motive of rampage shooters, as well as recommendation for more effective dialogue regarding prevention of school shootings. Christopher Harper- Mercer left behind "My Story" following his rampage shooting at Umpqua Community College in Roseburg, OR, on October, 1, 2015 where he injured eight and killed nine. Through the lens of Kenneth Burke's Pentad from Grammar of Motives, Burke's "Rhetoric of Hitler's Battle,"² and aspects of Neo-Aristotelian rhetorical criticism, Stammen rhetorically analyzed Harper- Mercer's manifesto. The rhetoric in "My Story" seeks to create a discourse community between rampage shooters that could be the catalyst for troubled students to commit their own rampage shooting. "My Story" and other manifestos are largely excluded from the ongoing dialogue regarding school shootings, in both education and policy. Erasing the agent, or shooter, seems to be commonplace throughout prevention efforts that focus on gun control, campus security, mental health, media, and other factors that Stammen finds to be counterproductive. In Stammen's presentation, she argues that until a significant paradigm shift occurs, rampage shootings in schools and other public spaces may continue to occur based on evidence from the manifesto of Harper- Mercer.

Haley STAMMEN

Project Title: Visual Identity of Indigenous Peoples of North America Portrayed Through Western Composition

Type of Presentation: Panel

Presentation Time: 12:30 pm

Faculty Sponsor: Cori Brewster

Abstract: In "Visual Identity of Indigenous Peoples of North America Portrayed Through Western Composition," Haley Stammen and Sanheshke Wakinyan explore representation of Native Americans and exclusion of visual literacy throughout composition instruction in United States higher education through the lens of literacy. Written texts are seen as the dominant form of communication in Western education. Wakinyan explains how Native American literacy patterns were impacted by colonialism; those patterns continue into contemporary higher education. Through punishment and ostracization, an entire identity continues to be whitewashed and erased from schools. Stammen argues visual literacy has a place in composition instruction, though these practices could extend to other disciplines. Many courses, particularly composition, primarily focus on written texts, which is problematic because students may not realize they use similar skills to interpret a text and an image. By explicitly showing students how this skill can transfer, a student can effectively respond to more artifacts. By challenging students to communicate

effectively in different modes, students will have more dexterity in interpreting texts in different modes. Instruction will be more inclusive, as it reaches students whose ability and cultural backgrounds favor oral

Brianna STAVAAS

Project Title: Analysis of DNA Barcodes in Variegated Mud-Loving Beetles (Coleoptera: heteroceridae) on Ladd Marsh, Union County, Oregon

Type of Presentation: Poster

Presentation Time: 10:30 am – 11:30 am

Faculty Sponsor: John Rinehart

Abstract: Variegated Mud-Loving Beetles are a cosmopolitan family of small insects, often difficult to identify to species but typically collected in enormous numbers via UV-light traps. We have performed DNA barcoding on a set of individuals collected in 2015 from multiple locations on Ladd Marsh. This analysis, followed by construction of phylogenetic trees, reveals anomalous taxa that are not represented in the known DNA barcode databases (BOLD and GenBank). While these may represent species known by morphological methods that have never been barcoded, they may also represent new species not yet described. We present both sequence data and phylogenetic analysis to support this conclusion.or visual communication.

Brianna STAVAAS

Project Title: Analysis of Pyrrolizidine Alkaloids in *Cryptantha Maritima*

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Ron Kelley

Abstract: Pyrrolizidine alkaloids (PA's) are potentially toxic, naturally occurring secondary products, typically found in the plant family Boraginaceae. As a part of an alkaloid analysis of the Boraginaceae family, *Cryptantha maritima* from the Mojave and Sonoran Deserts of southern California was analyzed to establish a GC-MS PA profile. A preliminary analysis of the initial sample showed over fifteen resolved PA's. Most alkaloids appear to be retronecine based compounds. The major compounds are consistent with the open 7,9-diester structures where the 7- position is principally esterified with derivatives of angelic acid. Five previously examined North American annual *Cryptantha* species have displayed a diverse array of PA diester structures, especially in regards to the esterifying carboxylic acids. However, *C. maritima* appears to be primarily esterified at the 9-position with latifolic acid instead of trachelanthic acid. This is the first reported PA analysis of the common desert annual *C. maritima*

Shylee STROUD (See abstract under Charlette BURGHARD)

Ben TELLERIA

Project Title: Results of an After School Program to Improve Emotional Health

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Kelly Rice

Abstract: Physical activity (PA) has shown to improve emotional health (EH); according to CDC, regular PA can reduce the risk of depression, decrease anxiety, and aids in better sleep. PURPOSE: The purpose of this study was to see if the outdoor after school PA program improves EH. METHODS: Get Outside - After School Activity Program (GO-ASAP) is a 20 week (2 X wk/150-180 mins) program aimed to increase PA in

adolescents in rural Oregon. Participants were recruited from a local middle school. Assessments of EH were taken using the Social Emotional Health Survey pre and mid program. Survey included four categories: Belief-in-Self, Belief-in-Others, Emotional Competence, and Engaged Living using a 4-point scale. RESULTS: Subjects (m=15, f=10) were 14.04 years of age at baseline. Mean $\bar{X} \pm$ SD for pre, mid EH results; Belief-in-Self (2.9+0.5, 2.8+0.9, p=0.2). Belief-in-Others (3.09+0.4, 3.02+0.7, p=0.4). Emotional Competence (3.05+0.5, 3.4+1.3, p=0.1). Engaged Living (3.02+0.6, 2.6+0.9, p=0.0009). Combined same 11 participants pre and mid (3.1+0.2, 2.8+0.8, p=0.00003). CONCLUSION: Significant decrease in Engaged Living and combined categories of same 11 participants from pre to mid. The program could have an effect on EH, but a larger, consistent sample size and post data is needed to determine this.

Christa TRYON

Project Title: Determination of Presence of Human Antigens in Salmon Species

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Joe Corsini

Abstract: The purpose of this study was to determine whether human blood antigen groups occur in Coho salmon (*Oncorhynchus kisutch*) and Steelhead salmon (*Oncorhynchus mykiss*). Anti-A and Anti-B serum included in a standard card agglutination kit was used to test for agglutination of fish blood samples for six Steelhead and 29 Coho. Blood collection took place at two hatcheries; the Steelhead came from 3-Mile Adult Acclimation Site, Oregon and the Coho came from Wallowa Hatchery, Oregon. Of the female Steelhead salmon four out of the five fish had varying levels of agglutination when their blood was tested with the human antigens A and B. Two of the fish did not agglutinate. Two reacted with anti-A antibody and four reacted with anti-B antibody. Fifteen reacted to both A and B antibody and eight reacted to neither. This led to the conclusion that both Coho and Steelhead salmon appear to have varying levels of human blood group antigens A and B. This suggests an interesting conservation of the blood group carbohydrates spanning hundreds of millions of years.

Kai TURNER (See abstract under Justin HUGHES)

Jenny VARDANEGA (See abstract under Callie NORMAN)

Sanheshke WAKINYAN (See abstract under Haley STAMMEN)

Taylor WALDON (See abstract under Peter CAIN)

Cassidy WATKINS

Project Title: Run Girl Run Program

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Kelly Rice

Abstract: Introduction: In today's world there is an increase in low self-esteem and inactivity in pre-adolescent and adolescent females. Programs have been developed to provide opportunity for adolescence to establish a healthy lifestyle while they build friendships, and their self-esteem. Methods: Run Girl Run is an 8-week (2X wk/ 150 min) program aimed to increase healthy lifestyle choices, increase physical activity, and build self-confidence in young girls. 4th and 5th-grade girls were recruited from

Central Elementary through classroom visitation. Surveys were then given to the participants to measure their feelings about themselves. Results: 19 registered participants ranging from the ages of 9 and 12. There was one survey that was given with the result of 16 girl participants, and it will be given 3 times throughout the program. The first survey has been conducted and participants were measured on a 0-3 point scale. Mean $\bar{X} \pm SD$ for survey includes the total of self-esteem (1.7 ± 1.09). Conclusion: This program evaluates the changes in self-esteem and attitudes towards physical activity. And so, the remainder of the program will evaluate the changes of self-esteem through physical activity through a pre-test and post-test.

Cassidy WATKINS (See abstracts under Bailey WEINKE and Ashlee MULLER)

Bailey WEINKE

Project Title: A program to increase physical activity and decrease anxiety in 4th and 5th grade girls

Type of Presentation: Poster

Presentation Time: 12:30 pm – 1:30 pm

Faculty Sponsor: Kelly Rice

Abstract: Introduction: The Run Girl Run program is aimed to help girls become more physically active and reduce feelings of anxiety about exercise in a group setting. The goal is to establish healthy friendships and create an environment that girls feel comfortable enough to exercise thoroughly and continuously. Methods: 8 wk program, 2X/wk for 90 minutes aimed at increasing physical activity in Central Elementary 4th and 5th grade girls, ages 9-12 years old. Baseline assessment of fear and avoidance anxiety was taken by the 16-question Physical Activity and Sports Anxiety Scale. Nine questions focused on sport, seven focused on exercise. 19 girl participants and 16 surveys were completed. The survey was graded on a 5-point Likert scale, and questions 3, 11, and 14 had reverse scoring. Results: In total, survey scores ranged from 23 (low) to 67 (high), averaging 41.56. A score of 34 indicates anxiety, resulting in 11 girls having anxiety and five not. Scores for the nine sports linked questions ranged from 11 to 41, averaging 22.68. Exercise question scores ranged 11 to 27, averaging 18.88. Conclusion: The remainder of the program will evaluate how feelings of anxiety may change about physical activity through a pre-test and post-test.

Bailey WEINKE (See abstracts under Ashlee MULLER and Cassidy WATKINS)

Jeff WHINERY (See abstract under Justin HUGHES)

Mick WILSON

Project Title: Cold War Teaching Unit: A Critique of American Exceptionalism

Type of Presentation: Talk

Presentation Time: 11:30 am

Faculty Sponsor: Ryan Dearing

Abstract: The goal of this teaching unit is to examine the global spheres of U.S. influence during the Cold War while critiquing the historical lens of American exceptionalism in order to present the legacy of the conflict as something far more complex than an ideological victory of capitalism over communism. Lesson plans will discuss the history of events that transpired during the Cold War, including, but not limited to, the Marshall Plan, the development of NATO, the Bay of Pigs, Detente, and the dissolution of the Soviet Union. Moreover, the unit will introduce and critique the concept of American exceptionalism through the

events of the Cold War in order to foster a better understanding of how deeply such exceptionalism influenced politics, diplomacy, and ideology during the period. I will discuss the impact of American exceptionalism on popular culture, the questioning of this concept during the anti-war movement, and scholarly debates centering on American exceptionalism and the Cold War.

Austin WINEGAR

Project Title: Surface Modification of Indium Tin Oxide Substrates for Depositing Aqueous Cobalt Phosphate Thin Films

Type of Presentation: Poster

Presentation Time: 11:30 am – 12:30 pm

Faculty Sponsor: Colby Heideman

Abstract: Spin coating high quality thin films from aqueous precursors is highly dependent on the surface chemistry of the substrate. In this study, the influence of the surface hydrophilicity of indium tin oxide substrates on cobalt phosphate thin films deposited by spin coating aqueous precursor solutions was explored. The hydrophilicity of the substrate surface was controlled by applying varying voltages between the indium tin oxide surface and a stainless steel electrode in a sulfuric acid electrolyte. The hydrophilicity of the surfaces was measured by the contact angle of water drops resting on the substrate surface. Thin films of cobalt phosphate were spin coated onto the substrate surfaces prepared with different hydrophilicities to explore the influence of the surface chemistry on the quality of the films.

Alicia WIRTH (See abstract under Erika LAVADOUR-YOHE)

Matt WONG (See abstract under Cole ASHBY)

Conor WOOD

Project Title: From Hopyards to Brew Kettles: How the Hop Flavored the Craft Beer Revolution

Type of Presentation: Talk

Presentation Time: 1:30 pm

Faculty Sponsor: Ryan Dearing

Abstract: The United States is currently experiencing a craft beer revolution born out of the homogenous beer culture that had been dominated by bland pale lagers for half a century. From the nineteenth century forward, the hop growing industry of the Pacific Northwest featured a market defined by massive booms and crushing busts. Resourceful hop growers even survived Prohibition by supplying the needs of a global market and thereafter the newly-emerging mega breweries. Coinciding with the craft beer revolution of the 1980s, hop breeding programs began to bear fruit for new microbreweries to test their mettle. American craft brewers marched into the twenty-first century with hops held in high esteem, determined to reconnect the masses with true beer. These enterprising brewers reintroduced hops into flavorful ales in ways never experienced by drinkers inundated by bland flavorless beer. Through their innovation and steadfastness to their craft, hop growers and craft brewers have cemented the Pacific Northwest in the minds of Americans as a nirvana for hop heads and beer geeks. Today, local breweries across the nation continue to use hops from the Pacific Northwest to define their beer revolution.

Christopher YOUNGMAN (See abstract under Makayla ADAMS)

**Eastern Oregon University, College of Education and Oregon Teacher Pathway
High School Student Poster Presentations
Tawnya Lubbes, Director, Oregon Teacher Pathway
Simmons Gallery, First Floor of Badgley Hall, 10:20 a.m. to 12:05 p.m.**

Hermiston High School (10:20 a.m. – 10:55 a.m.)

- Marlene BRITO How can classrooms adapt to better serve the needs of their communities?
- Crystal DIAZ What factors other than test scores should be considered in determining a Student's academic achievement?

- Hope DIRCKSEN Grades label, discouragement, and corrupt student learning
- Brianna FLORES The long-term benefits of preschool programs
- Juliana GONZALEZ Handwriting as part of elementary curriculum
- Martin HEREDIA How does standardized testing affect student engagement?
- Paola LEAL Which is better for student success: the four-day school week vs. the five-day school week?

- Stephanie MIEARS Teacher to student relationships are crucial for student success in the classroom

- Angelica MONTES VELAZQUEZ What are the benefits of preschool programs?
- Edgar NAVARRETE RUIZ "Core" classes changing to include CTE courses to prepare students for future careers

- Elysa RADA Grading policies and standardized testing are hindering student engagement with the curriculum

- Berenice RAMIREZ What effect do elective and after-school programs have on student success?

- Susan RAMIREZ GARCIA How does student gender affect the education of rural students?
- Teagan RAY What are the harmful effects of PE classes being segregated by gender?
- Hannah THOMPSON How does teacher's use of multiple learning styles affect student achievement?

- Michelle WEST Without the motivation and unique teaching strategies teachers provide, students would not have the same opportunities

- Courtney WHEELER What are the critical programs for low-income schools?

McLoughlin High School, Milton Freewater (11:30 a.m. – 12:05 p.m.)

- Tehya CLARK How might one improve reading comprehension: A look into classic literature and its influence on students
- Bianca GARCIA The impact of extracurricular activities on students' academic achievement
- Brianna HERNANDEZ Trauma informed teachers: Supporting students affected by family adversity
- Grace MILLER Recess and brain breaks: What are the effects of free time on elementary students?
- Noah PRATTON Does positive self-esteem affect academic performance in high school students?
- Inez PULIDO The effects of culturally responsive teaching
- Valentino SALDANA Can music improve students' educational experience?
- Alyssa SCHOEN Character education in schools: How character education programs affect student success
- Cassidy SCHOEN The effects of mental health on high school students
- McKenna YENSEN The importance of student health: How does physical and mental health affect academics?

Ontario High School (11:30 a.m. – 12:05 p.m.)

- Mary Ellen BUXTON Importance of art in the classroom
- Alanna CROCKETT Difficulties of attending higher education for low income students
- Esme DE LE ROSA Parent involvement and grades
- Gabby FRISBY How foster care students are incorporated into education
- Adrianna JUAREZ Student disadvantages when living with poverty
- Keanna KESTIE How schools deal/don't deal with homeless students
- Noah NAVARRETE How sports and PE have a positive impact on student academics
- Burgandee PORTER How tech helps special needs children
- Cassidy SEEBART How smaller class sizes effect student learning
- Sierra SIFUENTES How lack of sleep affects student learning
- Lizeth TINOCO How parent involvement effects student learning
- Bianca TRAPERO How minorities are treated in the classroom and its effect on their future education

Pendleton High School (10:55 a.m. – 11:30 a.m.)

- Kathleen RODRIQUEZ with Shane MILTENBERGER Bullying effects on education
- Chenoah BEGAY How does child abuse affect a student's academic success
- Elizabeth JOHNSON How is a teenager's academic success affected by being bullied for their body image?
- Andrew McALARY The impact of school lunches on student's performance in school
- Talia LUNNY with Pearl McCUNE Poverty in youth and the effects of academic achievement
- Kacey ROBBINS Does the value of homework differ between grade levels?
- Serena BONTEMPS How do teacher/student relationships affect kids' participation and academic success?
- Maggie SCANLAN with Gage JONES-WARD The relationship between homework and academic achievement
- Hailey CHRISTENSEN with Jessica THOMAS How does family income affect academic achievements and opportunities?

Umatilla High School (10:55 a.m. – 11:30 a.m.)

- Ayana REYES The effect of changing school start times
- Paola MARTINEZ Reducing tardies among high school students
- Samantha CONTRERAS Why personal finance classes should satisfy a high school math credit
- Andrea MALDONADO How being an immigrant affects academics
- Yessenia GARCIA SANCHEZ Improving academic achievement for students with autism
- Kiersten HOLZ The effects of extracurricular sports on student academic achievement
- Fatima SANCHEZ The effects of domestic violence on learning
- Jennifer VAZQUEZ Single parents at school
- Paige MATLACK How mental illnesses affect adolescents

Vale High School (10:20 a.m. – 10:55 a.m.)

- Flavia BRUTON The effects of music education on student achievement
- Erika PARK How does learning a second language improve academic success?
- Marisa POST How does attending preschool impact future educational success?
- Nicole ZACHARIAS The effects of family engagement on academic achievement