

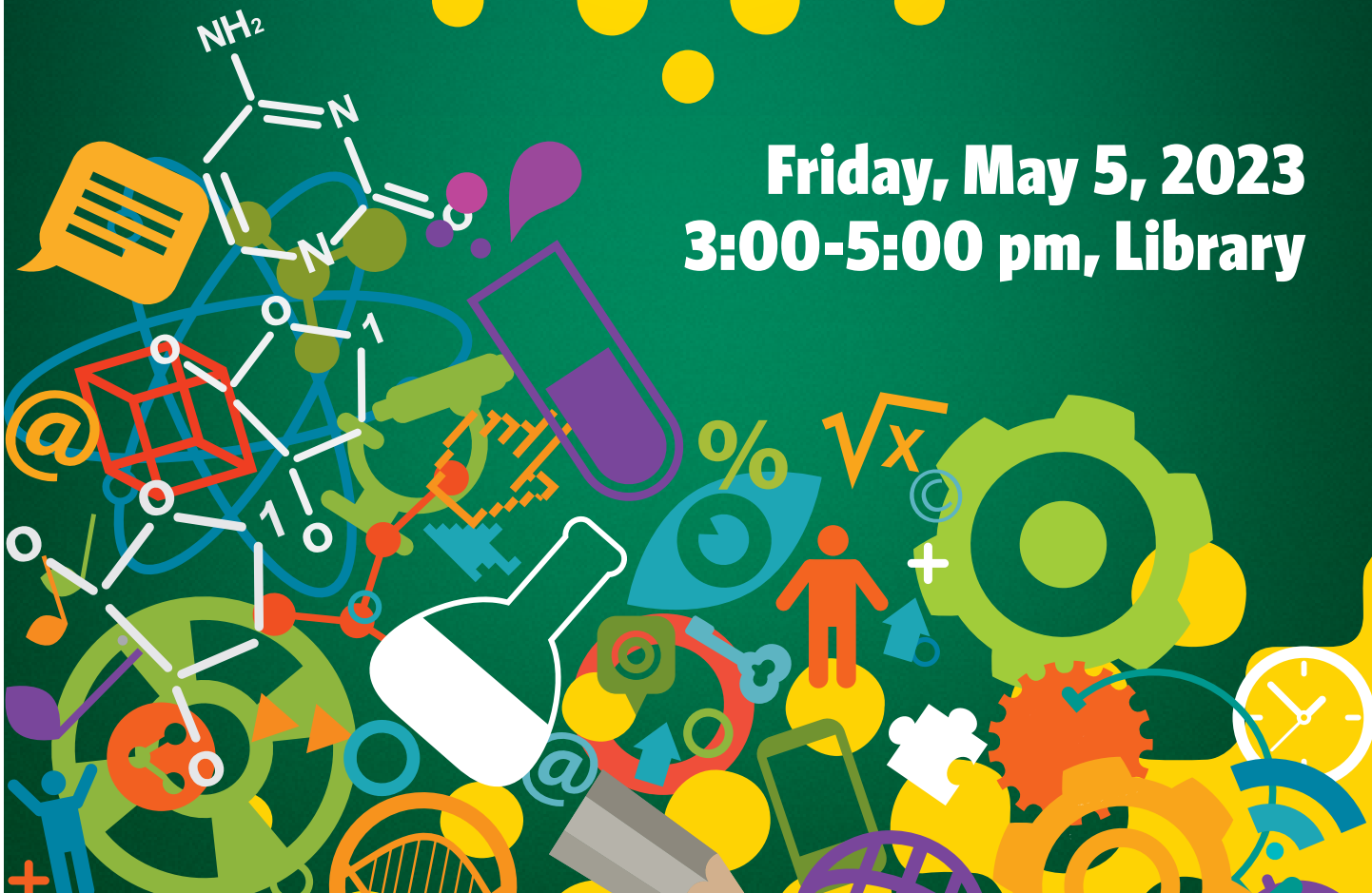
Cal Poly  
**Humboldt.**

**10th Annual**

# ideaFest

A Showcase of Research and Creative Projects

**Friday, May 5, 2023  
3:00-5:00 pm, Library**





## Research Presentations

2nd and 3rd Floors • 3:00–5:00 pm • Grouped by Department

## Humboldt Sculpture Walk

Sculptures on All Floors • Guided Tours at 12:00 pm & 5:00 pm (meet in Lobby)

## Becoming a Polytechnic: The Nexus of 21st Century Scholarship

3rd Floor, Room 317 • 2:00–3:00 pm

## Musical Performances

1st Floor • 2:00–4:00 pm

## CIRM Bridges 3.0 Connect Lightning Talks

2nd Floor, Room 209 (Fishbowl) • 3:00–5:00 pm

## Emerging Media for the Gallery

3rd Floor • 4:00–5:00 pm

## Film Screenings

1st Floor, Room 120 • 4:15–5:00 pm

## Research Presentations | 2nd & 3rd Floors Grouped by Department

Listed here in alphabetical order by poster title

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“The Sense of Solidarity”: relational ethics, peer support, & specialization resources for rural & Indigenous social work education program alumni

**Calla Peltier-Olson**, Social Work, Graduate Student

### College of Professional Studies

Humboldt Social Work Alumni experience unique challenges and exhibit particular strengths as a virtue of the unique focus of the Program and the context of the rural & Indigenous communities served. I assessed how alumni’s sustainability in the field might be bolstered, and how their education impacted their practice/values. I facilitated a focus group of graduating Master’s students and an online survey open to all alumni, and translated the data into recommendations. I used Indigenous MMR, combining quantitative data, thematic analysis, & relational epistemology. I recommend the creation of a decentralized alumni organization, drawing from other postcolonial-education-focused alumni orgs.

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“Think of the children!”: Understanding Parental and Community Opposition to Critical Race Theory in Schools

**Daniela Tierra**, Sociology, Graduate Student

### College of Arts, Humanities & Social Sciences

Since 2020, opposition to Critical Race Theory (CRT) in schools has been a highly controversial topic. The heated topic and buzzwords on social media and conservative news media look dramatically different than the CRT of academic disciplines. This begs the question, what do opponents of CRT believe it to be, and why are they opposed to it? This research utilizes open-ended qualitative interviews to uncover what opponents of CRT believe it to be and why people are opposed to it.

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Abating Catheter Associated Urinary Tract Infections (CAUTIs)

**Harley Davis**, Nursing, Undergraduate Student

### College of Professional Studies

Catheter associated urinary tract infections (CAUTIs) continue to rise across the nation. Implementation of advancing technology must occur to decrease this problem. Any individual with a urinary catheter for greater than thirty days is at a large risk for developing bacteriuria. Bacteriuria increases the chances of developing a urinary tract infection. Using noble metal alloy lined catheters, we can change this. These catheters have a non-pharmacologic, non-toxic coating that creates a small charge. This micro current makes it much more difficult for bacteria to colonize in a catheter. Noble metal alloy catheters will decrease CAUTI rates in patients with chronic foley catheter.

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Acculturation in Sports Nutrition

**Tally Chavez**, Kinesiology & Recreation Administration, Graduate Student

### College of Professional Studies

This research will explore the perceptions and experiences of Mexican American student-athletes regarding the representation, or lack thereof, of traditional and cultural foods in sports nutrition dietary recommendations.

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ACEs, Perceived Academic Control, and GPA in College Students of Diverse Backgrounds

**Brandilynn Villarreal**, Psychology, Faculty;

**Luis Lara**, Psychology, Graduate Student

### College of Professional Studies

The purpose of the study is to explore how Adverse Childhood Experiences (ACEs) relate to perceived academic control and GPA for students with racially marginalized identities. We hypothesized: H1) students with higher ACE scores will show lower levels of academic control than students with lower ACE scores, H2) students with racially marginalized identities will report higher levels of ACEs, lower GPAs, and lower academic control than students not from racially marginalized identities, and H3) first-year students will report lower academic control and GPAs than continuing students. The results indicated partial support for the hypotheses. Additional research and student supports are needed.

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Addressing Burnout in Registered Nurses

**Kacey Meyer**, Nursing, Undergraduate Student

### College of Professional Studies

Burnout is a chronic condition occurring at high rates in Registered Nurses due to working in high stress work environments, often while understaffed and with demanding workloads. The effects of burnout impact the health of not only RNs but can have negative consequences for their patients. This issue should be addressed for the mental and physical health of this critical workforce and for the patients under their care. Mindful practice, self-care, improving resiliency, and organizational culture change can decrease stress and in turn may reduce incidence of burnout for RNs.

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## African Presence in the Ancient New World

**Garrett Spruiell**, Anthropology, Undergraduate Student

### College of Arts, Humanities & Social Sciences

Within this research project, I'll be presenting a controversial topic that many today deem as unchallengeable due to the influence from the history books the colonizers of our country wrote to indoctrinate us with. From this investigation, I intend to analyze conflicting theories so as to narrow down the plausibility of pre-Columbian transoceanic travel between Africa and the Americas. My goal with this project is to elevate African voices and perspectives, to show the public the possibility of alternative truths, as well as spread a sense of skepticism towards our Western history books.

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## Analysis of a G-Protein Coupled Receptor, CB2

**David Lopez**, Chemistry, Undergraduate Student;

**Amanda Ratcliff**, Chemistry, Undergraduate Student;

**Jenny Cappuccio**, Chemistry, Staff

### College of Natural Resources & Sciences

The CB2 G-protein coupled receptors (GPCR) is found in the brainstem & hippocampus and is devoid of psychotropic effects but is less studied than the CB1 receptor. CB2 is inducible in CNS microglia following inflammation or injury, indicating a role in pain response. Here we sought to analyze CB2 using ChimeraX structures and overcome GPCR protein insolubility in extraction. The pET28a-CNR2, plasmid created and transformed into E.coli pLysS, was confirmed by restriction digest. Purification of CB2 micelles was achieved by affinity chromatography with detergent (43 kD). We aim to utilize nanodiscs to stabilize CB2, allowing studies of the molecular underpinnings informing treatment options.

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## Anthropogenic feeding of California ground squirrels in an urban state park

**Vanessa Ramirez**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

California ground squirrels are an abundant wildlife species at Candlestick Point State Recreation Area in San Francisco, where they are regularly fed by park visitors. The goal of this study was to provide the park with useful information about the ecology of their resident ground squirrel population including their activity patterns, the types of human foods in their diets, and potential impacts of access to anthropogenic food sources. Understanding how these squirrels interact with visitors and how these interactions influence their behavior and body condition is important for management of both park visitors and wildlife.

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## Art of Sustainability - UN Sustainable Development Goals Coloring Poster (in English and Spanish)

**Morgan Barker**, Library, Faculty

### Library

Art of Sustainability - color, relax and learn - using the United Nations 17 Sustainable Development Goals. These critical call-to-action elements represent sincere ways that we all can advocate for social, environmental and economic issues. Whether you are interested in climate change, working on inequality and injustice, reducing poverty, developing clean water and more - this coloring page will allow you to see these topics in new ways. What are the intersections you see in life, work and your university projects? Coloring page - created by Angela Lukanovich and Jen Panaro <https://www.raisingglobalkidizens.com/united-nations-sustainable-development-goals-coloring-poster/>

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## Assessing and mitigating metabolic response of HEK293 cells to cytotoxic metals using ascorbic acid

**Elizabeth Kowalski**, Biological Sciences, Undergraduate Student;

**Amar Tojaga**, Biological Sciences, Undergraduate Student;

**Brizeida Mejia Espinoza**, Biological Sciences, Undergraduate Student

### College of Natural Resources & Sciences

We examined how HEK293 kidney cells responded metabolically to heavy metal poisoning by cadmium chloride (CdCl<sub>2</sub>), aluminum chloride (AlCl<sub>3</sub>), and cesium chloride (CsCl) using two fluorometric assays (resazurin and MitoTracker). We then attempted to mitigate adverse effects by treating these cells with ascorbic acid (vitamin C).

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## Bat Activity within Urban and Rural Landscapes in Arcata, California

**Gonzalo Ayala**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Bats are found in urban and natural habitats, although their presence and behavior may differ depending on the environment. Bats can also be affected by various anthropogenic factors such as land conversion, and displacing their establishment. I determine the activity of 3 bat species: California myotis, silver-haired bat, and Mexican free-tailed bat, within urban and natural landscapes found throughout Arcata, CA. Urban landscapes were determined by the presence of buildings in every cardinal direction. This research approach can help determine how bats use valuable habitats which can be incorporated into urban planning.

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## Beau Pre Golf Club presents: College Night

**Brenden Barry**, Kinesiology & Recreation

Administration, Undergraduate Student

### College of Professional Studies

The event was referred to as College Night or College Golf Night, but all the flyers said Beau Pre Golf Club presents: College Night. The goal for the event was to get students out recreating at a local recreation facility and to introduce my fellow students to the great game of golf in the cheapest way possible, FREE!

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## Behavioral Health Resource Booklet For Youth in the Juvenile Justice System

**Sally Stewart**, Social Work, Graduate Student

### College of Professional Studies

My community project proposal mirrors what the youth in Humboldt County supervision, emergency monitoring, juvenile custody, ward, and non-ward probation, and their guardian(s) wish they knew, or want to reflect on. Resources for support and relevant information to navigate our legal system and improve our clients' probabilities for success on the outside.

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## Biological Profiles: An analysis on the applicability and implications of traditional and new methods in forensic anthropology

**Jazmin Borrayo**, Anthropology, Undergraduate Student

### College of Arts, Humanities & Social Sciences

In forensics, commonly used when conducting an assessment of skeletal remains is the implementation of a biological profile. The key elements that typically form the basic biological profile are age, ancestry, sex, and stature. These components consist of further methods that comprise the estimation process and are essential in identification. Within recent years, there has been a rise in attention to the use and application of certain methods. This project analyzes the applicability and implications of traditional methods commonly used in forensic anthropology when conducting biological profiles as well as examines the emergence of new methods in the field.

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## Bird Diversity in Arcata, California: A Study on Urban Influence

**Brittany Ocheltree**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

In this study, the primary goal was to observe the effects of urbanization on bird species diversity and composition of native and non-native species in Arcata, California. Methods include fixed radius 75-meter point counts for ten minutes, within thirty predetermined study sites, where I counted bird species and the abundance of birds, landscape

features (e.g., building density), along with noting any human activity that may occur. I hypothesized that non-native species would increase with increasing building density. In conjunction with that species diversity would decrease with building density.

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## Black Phoebe Forage Rates

**Blake Hefner**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

An analysis of how foraging rates in Black phoebe differs in wetland environments vs urban environments

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## Blockburger v. United States

**Mason Gardner**, Politics, Undergraduate Student

### College of Arts, Humanities & Social Sciences

One day, you decide to use a firearm to rob a convenience store. You are caught, and are charged with first degree robbery and brandishing a deadly weapon. These two charges came from the same crime; would this be considered double jeopardy? Blockburger v. United States, a landmark supreme court case, settled this legal question in 1932. The case established the "Blockburger test", which states that the government can only prosecute an individual for violating two different statutes in a single crime/act if each statute requires an element/fact for the government to prove that is independent of the other statute.

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## Boundaries in Death: Deviant Burials and Mortuary Practices of Slavic Cultural Origin

**Rowan Vespia**, Anthropology, Undergraduate Student

### College of Arts, Humanities & Social Sciences

The goal of this presentation is to analyze the ways in which beliefs surrounding death and mortuary practices were changed in the Medieval period by the introduction of Christianity to Slavic cultures - focusing primarily on Poland and atypical burials. I have a poster and power point recorded presentation available.

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## Buddy Bench and Buddy Squad Programs

**Maddie Pyles**, Social Work, Graduate Student

### College of Professional Studies

Many students continually still face adverse mental and social-emotional health around school educations today. The buddy bench and buddy squad programs address adverse mental and social-emotional health for pre-k to fifth-grade students (e.g., depression, anxiety, stigma, shyness, coping skills, bullying, loneliness, and social isolation). Both of the programs help with positive mental and social-emotional support, creating new friendships, building social skills (e.g., problem-solving, conflict resolution, and other coping skills), and fostering students' community. Both of the programs are excellent ways to promote positive outreach for every school.

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## Burnout Syndrome an Occupational Hazard for Nurses

**Erika Sterling**, Nursing, Undergraduate Student

### College of Professional Studies

Burnout syndrome is an occupational hazard that can affect healthcare professionals, especially bedside nurses that work in a hospital setting. It is comprised of three main components; emotional exhaustion, depersonalization, and reduced professional efficacy. It occurs when healthcare workers experience chronic stress. It can lead to mental health issues such as depression, anxiety and PTSD. It negatively affects patient outcomes and patient satisfaction. It also increases nurse turnover which results in understaffing, therefore affecting patient safety. Improving working conditions for nurses, education and quality leadership will help decrease the prevalence of burnout syndrome.

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## Cal Poly Humboldt 3D Digital Herbarium

**AJ Bealum**, Computer Science, Staff;

**David Yaranon**, Computer Science, Undergraduate Student

### Library

The Cal Poly Humboldt 3D Digital Herbarium improves upon current digital herbaria by incorporating 3D models of flora in addition to images of specimens from physical herbariums. These annotated models in addition to a social component implemented with the integration of iNaturalist make for the most immersive, fun and memorable experience of any digital herbarium out there.

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## Climate, Competition, and Cavity-nesters, oh my!

**Kellie Crouch**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Fluctuations in climate variables, such as temperature and precipitation, have the ability to negatively influence the breeding success of birds. This study aimed to determine how these factors impact the breeding success of cavity-nesting songbirds in California. In order to do this, I analyzed relationships between nest box data from the California Bluebird Recovery Program and climate data from the National Oceanic Atmospheric Administration (NOAA).

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## Community Brochure for Open Door Community Health Centers

**Andrea Jones**, Social Work, Graduate Student

### College of Professional Studies

My research focuses on community access to cultural and crisis resources, through networking with community health centers. My brochure will help reach a broader population throughout Humboldt and Del Norte counties on educating and advocating for families about health services offered at their local clinic site. While Open Door struggles to retain staff, and providers, its important for the community to have

additional access to other resources that are not quite at capacity. This will support small organizations that focus on cultural and diverse practices, as well as acknowledge Indigenous people by having others support and give back through their honor tax.

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## Community Youth Center Capacity Building

**John Evans**, Social Work, Graduate Student

### College of Professional Studies

Dream Quest (DQ) is a youth center in Willow Creek, CA that provides positive youth development opportunities to the communities of Eastern Humboldt County and Western Trinity County. DQ is currently planning for an expansion into a new purpose built building which will extend DQ's capacity to positively impact the community. Along with facilities expansion, DQ is planning to expand the capacity of its staff and programming, including the continual improvement of youth outcomes. DQ requested my assistance to collaborate in an effort to uncover knowledge around program evaluation and the experience of families involved with DQ.

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## Comparing Passerine Presence in an Urban College Town to a Nearby Rural Marsh Sanctuary

**Jocelyn Lucente**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

With an ever-increasing push for urbanization, it is necessary to monitor the passerine's ability to tolerate increased anthropogenesis and ensure their persistence among changing habitats. Arcata, California is home to both a lively college campus (CPH) and a restored wildlife sanctuary (AMWS), offering ideally contrasting study sites to sample at. In order to determine if urbanization is affecting the birds' occupancy, I will conduct a total of 30 point-counts at 15 urban and 15 rural sites to compare the number of individual passerines across land types. I hypothesize to detect a higher abundance of passerines throughout the rural settings.

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## Comparing Salamander Activity Through Temperature Humidity and Rain

**William Jones**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

In this project I measured changes in the level of salamander activity based upon the local temperature, humidity, and the presence of rain in the Arcata Community Forest behind Cal Poly Humboldt.

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## Connecting Communities: Education and Resources for Humboldt County, California

**Joseph Meihak**, Wildlife, Undergraduate Student;

**Tania L. Estrada Rodriguez**, Undergraduate Student;

**Alayna Frank**, Undergraduate Student;

**Fernando Betancourt**, Undergraduate Student

### College of Natural Resources & Sciences

We created a website to promote ethical awareness and responsibility among the Cal Poly Humboldt community. The recent housing decisions have raised ethical concerns, and our website offers resources for housing, transportation, mental health, and local community services. We believe that these issues, such as food and housing insecurities and environmental impacts like pollution and resource scarcity, are interconnected. Our website aims to provide necessary resources to help address these issues and promote environmental consciousness.

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## Cultural Fire Behavior and Effects on Hazel Shrubs

**Thomas Paulson**, Forestry, Fire & Rangeland

Management, Undergraduate Student;

**Jeffrey Kane**, Forestry, Fire & Rangeland Management, Faculty

### College of Natural Resources & Sciences

Prescribed fire is a widely used land management technique that accomplishes many important cultural and ecological benefits to people and wildlife. Since 1935, wildfires have been suppressed and prescribed fires have been largely removed from the landscape. This has led to the loss of important cultural practices conducted by tribes in the Klamath Mountains. Prescribed fire is particularly useful for producing hazel plants that are optimal for basket weaving material used by the Karuk tribe. The goal of this study is to develop an allometric equation to quantify the relationship between hazel height and basal diameter and look into fire effects interactions with hazel.

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## Culturally-Relevant End of Life Care in Humboldt County

**Chandler Macik**, Social Work, Graduate Student

### College of Professional Studies

The purpose of our community project is to explore and assess whether any formalized local Indigenous palliative & hospice care services and resources exist in Humboldt County. Research was conducted to gauge the availability and accessibility of culturally-relevant end of life care services.

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## Destigmatizing Care In Pregnant People with Substance Use Disorder

**Nicky Edwards**, Nursing, Undergraduate Student

### College of Professional Studies

Pregnant people and families with substance use disorder who receive care at local rural clinics and hospitals need more recovery resources. Community nurses can assist by educating parents and families about proper Narcan use and first aid. Public health departments can assist by utilizing a collaborative referral system for additional resources. Physicians can be educated about compassionate care practices in communicating with patients. These interventions will lead to goals of pregnant people feeling safe seeking support from their providers, fewer newborns experiencing withdrawal symptoms, and less children being placed with child protective services thus keeping families together.

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## Determine the Effects of High-Incline Walking on Biomechanical Variables and EMG Patterns on Different Treadmill Deck Systems

**Rohit Kundu**, Kinesiology & Recreation

Administration, Graduate Student

### College of Professional Studies

While walking on the ground and using a treadmill are the standard mode of exercise, treadmill walking has gained popularity recently. Treadmills are more efficient and reliable because of the better control of speed, and grade, and can be used in all weather conditions. Even though multiple studies looked over the impact of surfaces at different inclines at biomechanics (gait, impact forces, tibial acceleration, and muscle activation), still the impact of surfaces has not been examined using different treadmill manufacturers while comparing high-incline (20%) with low-incline (1%).

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## Diversity Among University Students in the U.S.: An Analysis of Student Ethnic Group Preferences and its Impact on Campus Diversity

**Joseph Pang**, Psychology, Graduate Student;

**Diana Olivan**, Psychology

### College of Professional Studies

The current study explores students' ethnic identity, ethnocentrism, and friendship diversity and how they these variables relate to with whom students interact. The study uses research from intergroup relations, friendship diversity, and ethnic identification. Specifically, the study will examine how ethnic identification, ethnocentrism, and student cultural group involvement relate to intergroup anxiety which, in turn, relates to intergroup bias. Through this work, we seek to understand how intergroup relations stands amongst People of Color (POC) in the United States.

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## Does cleft palate repair surgery restore normal neural processing for infant faces?

**Rachael Kee**, Psychology, Graduate Student;  
**Amanda Hahn**, Psychology, Faculty

### College of Professional Studies

The current study used electroencephalography (EEG) to investigate adults’ processing of infant faces with cleft lip/palate before and after surgical repair. We found enhanced N170 responses for faces pre-repair surgery compared to post-repair surgery, suggesting that cleft lip/palate repair surgery may restore a more “normal” N170 response. Additionally, the P200 was smaller for the pre-repair surgery faces compared to post-repair surgery, which likely reflects the P200 responding to “typicality” for face stimuli as the post-repair surgery faces would appear more face-typical.

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## Does Having Siblings Affect Caretaking Responses to Infants?

**Joshua Worthington**, Psychology, Graduate Student;  
**Nathan Boone**, Psychology, Graduate Student;  
**Amanda Hahn**, Psychology, Faculty

### College of Professional Studies

Because siblings often fulfill a caregiver role in the home, this study investigated whether having siblings, and younger siblings in particular, impacts the reward value of and perceptual sensitivity to the ‘baby schema’. Participants completed a cuteness sensitivity rating task and an effort-based keypress task to measure the reward value of cuteness. They also reported whether they had siblings, and if so older vs younger siblings. Contrary to our hypotheses, having siblings did not influence the reward value of or perceptual sensitivity to ‘baby schema’.

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## Does Having Siblings Affect The Recognition of Children’s Emotional Displays?

**Nathan Boone**, Psychology, Graduate Student;  
**Andrew Greely**, Psychology, Graduate Student;  
**Amanda Hahn**, Psychology, Faculty

### College of Professional Studies

The present study investigated the relationship between sibling caretaking experience and the ability to recognize emotions in children’s faces. Accuracy for recognizing emotional displays in children’s faces was compared among individuals with younger siblings, older siblings, and no siblings. We did not find any evidence that having siblings impacts sensitivity to emotional displays in children’s faces. We did, however, find evidence that some emotions are more easily assessed than others regardless of sibling status.

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## Does the Thatcher Effect Extend to Infant Faces?

**Adnan Alyan**, Psychology, Undergraduate Student;  
**Nathan Boone**, Psychology, Graduate Student;  
**Amanda Hahn**, Psychology, Faculty

### College of Professional Studies

You will spend more time looking at faces than any other type of object in your lifetime. Because faces are such an important social signal, humans have developed a perceptual expertise for faces. Decades of research on the mechanisms of face processing have demonstrated we rely more heavily on configural processing strategies when viewing faces due to this expertise. However, this work has been done using almost exclusively adult facial stimuli. The current study uses a well-established configural disruption known as the Thatcher Effect to investigate the use of configural processing for infant faces. We find evidence that infant face processing may be less reliant on configural information.

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## Effects of Cleft Lip and Palate on Visual Scanning and Neural Processing of Infant Faces

**Juergen Riedelsheimer**, Psychology, Graduate Student;  
**Rhiannon Crimmins**, Psychology, Graduate Student;  
**David Harris**, Psychology, Graduate Student;  
**Amanda Hahn**, Psychology, Faculty

### College of Professional Studies

The current study used a combination of eye tracking and EEG to investigate early visual processing of infant faces with cleft lip/palate as well as the impact cleft palate has on perceived cuteness. The results demonstrate a significant decrease in early visual attention to the eye region and increased visual attention to the mouth for infants with cleft lip. Differences in neural processing are evident at both early and late stage processing (N170, P2, LPP).

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## Effects of Competitor Species on Black-Crowned Night Heron Activity at Different Times of Day

**Korinn Trinies**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Black-crowned night herons (*Nycticorax nycticorax*) share the same niche with various competitor species, influencing and effecting their behavior accordingly. Recent studies show that black-crowned night herons are mainly active during dusk and dawn due to the decreased presence of competitor species at these times, suggesting their nocturnal behavior is an adaption. During my study, I observed the proportion of high and low activity of black crowned night herons in relationship to presence of competitor species and the time of day. My data suggest greater numbers of black-crowned night herons with high presence of competitors, and higher activity level with less competitor.

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## Effects of Environmental Pressures and Physical Characteristics of Tide Pools on Marine Invertebrate Community Ecology

**Jessica Hoone**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Intertidal invertebrates are an integral part of tide pool ecosystems, so what is the intertidal invertebrate’s ideal habitat? Which tide pools foster the greatest abundance and species diversity? This study was conducted to determine whether five major players in the northern California invertebrate community fair better in the rocky tide pools of a sheltered bay or the sandy tide pools of a beach exposed to the full force of the waves.

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## Effects of Moon Illumination on Animal-Vehicle Collisions

**Sidney Wells**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Effects of moonlight illumination on animal-vehicle collisions

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## Effects of Substrate Rugosity on Abundance and Gonad Condition of Purple Urchins (*Strongylocentrotus purpuratus*) in the Intertidal Zone

**Victoria Johnson**, Biological Sciences, Undergraduate Student;  
**Julia Navasero**, Biological Sciences, Undergraduate Student

### College of Natural Resources & Sciences

In northern California, purple urchin (*Strongylocentrotus purpuratus*) populations have exploded, leading to an invasion of the intertidal zone with potential consequences for those communities. We aimed to determine if there was a relationship between surface rugosity and urchin abundance and condition in this recently invaded habitat. We found that urchins took advantage of any intertidal habitat, as abundance was independent of surface rugosity. However, surface rugosity was related to urchin condition, with urchins on rougher surfaces in better condition than those on other surfaces. Rocky intertidal surfaces may therefore provide refugia for overabundant subtidal urchin populations.

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## Effects of Tidal Conditions on Egret Foraging Behavior in Arcata Marsh

**Tania Estrada Rodriguez**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

This study examines how tidal levels impact egret foraging behavior in the Arcata Marsh and Wildlife Sanctuary (AMWS) in Humboldt County, California. This study aims to expand upon the limited existing research on the relationship between tidal conditions and egret foraging and to determine the effects of tide levels on egret foraging

behavior. Additionally, the study assesses the influence of temperature, overcast, tide, and waterfowl presence on egret foraging behavior and measures egret strike rate and success as parameters for assessing the overall impact of high and low tides on their foraging behavior.

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## Engineering Endothelial Cells to Treat Pulmonary Arterial Hypertension

**Heather Jackson-Pease**, Biological Sciences, Undergraduate Student

### College of Natural Resources & Sciences

Gene editing with CRISPR/Cas9 and AAVs has been a modern technology that has greatly influenced biological sciences. Coupling the editing technology of CRISPR and AAVs could lead to treating the underlying causes of pulmonary arterial hypertension (PAH). PAH is a progressive disease in your lungs that causes vasoconstriction and decreased blood flow, which can lead to heart failure. Placing a stent in the pulmonary artery, with endothelial cells engrafted on it, that overexpresses the important regulatory factors eNOS and VEGF, may lead to an increase in reendothelialization and vasodilation of the pulmonary artery.

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## Enhanced Learning in Biochemistry Using the Protein Data Bank and 3D Molecular Modeling in ChimeraX

**Frank Cappuccio**, Chemistry, Faculty;  
**Jenny Cappuccio**, Chemistry, Faculty;  
**Christopher Arias**, Biological Sciences, Undergraduate Student;  
**Ezekiel Buchert**, Chemistry, Undergraduate Student;  
**Johana Cruz Lopez**, Biological Sciences, Undergraduate Student;  
**Cesar Fernandez**, Chemistry, Undergraduate Student;  
**Elizabeth Kowalski**, Biological Sciences, Undergraduate Student;  
**Elisabet Tesla Nicholas**, Theatre, Film & Dance, Undergraduate Student;  
**Gabrielle Onnenga**, Chemistry, Undergraduate Student;  
**Kellie Pierson**, Biological Sciences, Undergraduate Student

### College of Natural Resources & Sciences

The Protein Data Bank (PDB) is a repository of atomic level resolution biological structures determined by researchers around the world. Protein macromolecular structures have become an essential tool for biotechnology fields. They are used to understand the chemical and biological processes in living systems and disease, and for precise drug design. Here students utilized the molecular modeling software UCSF ChimeraX to visualize 3D PDB protein structures of their choice. Students produced Quad Chart presentations and printed 3D models to allow for deep learning in protein structure.

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## Environmental Monitoring for Tests of Gravity Below Fifty Microns

**Tanner Hooven**, Physics & Astronomy, Undergraduate Student;  
**Claire Rogers**, Physics & Astronomy, Undergraduate Student;  
**Taylor Juchau**, Physics & Astronomy, Undergraduate Studentt;  
**C.D. Hoyle**, Physics & Astronomy, Faculty

### College of Natural Resources & Sciences

Reliable measurements of gravitational forces at scales smaller than a centimeter carry significant challenges. The non-gravitational forces that are generally negligible at the scale of everyday objects have a much more substantial effect in the sub-centimeter regime. Due to the nature of precision required in measuring micron-scale gravitational forces and the inherent weakness of gravity, it is important to record, model, and possibly suppress environmental effects in and around the experiment that may affect measurements. Recently, members of the Cal Poly Gravitational Physics Lab have focused on developing these environmental instruments and models to ensure high levels of precision.

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## Evaluation of a Novel Cellulase to Optimize Biofuel Production

**Amanda Ratcliff**, Biological Sciences, Undergraduate Student;  
**Sarai Tapia**, Chemistry, Undergraduate Student;  
**David Lopez**, Biological Sciences, Undergraduate Student

### College of Natural Resources & Sciences

Cellulose waste is utilized for biofuels, however cellulase enzymes are a limiting factor. We sought to evaluate a novel cellulase identified in cow rumen metagenomic analysis provided by the Joint Genome Institute. We performed DNA analysis, SDS PAGE, and a cellulase activity assay to theoretically calculate and compare to experimental molecular weight; and determine cellulase activity. The theoretical molar mass (64.9 kD) strongly correlates to the experimental molar mass (60.7 kDa). Purified cellulase has an activity, 6.27 cm<sup>2</sup>/ug, 6x higher versus commercial cellulase enzyme. These results have positive implications for the creation of biofuels from agricultural waste products.

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## Examining the relationship between zooplankton abundance and piscivorous bird richness at the Arcata Marsh

**Aminah Aryan**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

This study examined the relationship between zooplankton abundance and piscivorous bird richness at the Arcata Marsh

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## Exploratory Study for Indoor Turf Field Facilities on the North Coast

**Julia Hohman**, Kinesiology & Recreation Administration, Undergraduate Student

### College of Professional Studies

This poster describes an exploratory study that was completed this semester to explore the question of whether or not there is a need for an indoor field on the North Coast that would provide a solution that allows organized field sports to continue activities during adverse weather conditions in the low-income areas of Humboldt and Del Norte counties. Gathering data for research was carried out by talking to local individuals involved in recreational facilities development and members of sports associations. It was written to raise awareness of the need for such a space and in the hope of getting the community a step closer to figuring out how to provide such a recreation facility.

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## Exploring the Ultrastructure of Rust Fungus *Calyptospora columnaris*

**Michaela Regi**, Biological Sciences, Undergraduate Student

### College of Natural Resources & Sciences

Rust fungi are obligate plant parasites that exhibit multiple life stages with drastically different physical features depending on the host it infects. While studies in the classification of rust fungi are actively debated, the ultrastructure of this particular rust fungus has been vastly understudied. Using SEM and TEM, images were taken of *Calyptospora columnaris* to elucidate the fine features of these different stages in an attempt to give this fungus a more comprehensive visual representation.

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## Expression of a diverse set of olfactory receptors in the California slender salamander

**Seanamae Adams**, Biological Sciences, Undergraduate Student;  
**Karen Kiemnec-Tyburczy**, Biological Sciences, Faculty

### College of Natural Resources & Sciences

Vertebrates use proteins expressed in the sensory cells of the nasal cavity to detect odors and chemical signals. The study aimed to characterize the olfactory receptors (ORs) in the California Slender Salamander (*Batrachoseps attenuatus*). We used standard molecular genetics techniques (PCR and cloning) to isolate 15 partial sequences of ORs from salamander olfactory tissue. We used phylogenetic reconstruction to show that the salamander ORs we isolated grouped with the gamma family of ORs found in many other vertebrates. Our preliminary results suggest that this species has a large and diverse OR family, a finding consistent with their ecological reliance on chemical communication.

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## Fast Fashion

**Laquita Agwiak**, Wildlife, Undergraduate Student;  
**Marco Blancas**, Wildlife, Undergraduate Student;  
**Justin Packham**, Undergraduate Student

### College of Natural Resources & Sciences

Our creative project from our Wildlife 309 class: Case Studies in Environmental Ethics, focuses on the ethics of the fashion industry. With our outfits made from trash or found objects along with our posters, we are bringing waste to the forefront to expose the fashion industries façade. Even though the fashion industry is highly valuable and earns high revenues, it comes at a devastating cost to the environment as this industry is one of the top 7 polluters globally.

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## Flush It! Managing Antibiotic Residual Volume in Acute Care

**Breanna Lien**, Nursing, Undergraduate Student

### College of Professional Studies

This project considers the implication of administering small-volume antibiotics as an intermittent primary intravenous infusion. This method leaves significant residual volume in the IV tubing which leads to deviations from the prescribed dose and rate of administration. This is a common practice in acute care. A possible quality improvement project design using evidence-based practice is exhibited. The goal of the QI project would be to standardize policy, procedure, and administration of small-volume antibiotics to ensure consistent care and treatment for every patient.

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## Foraging and Vigilance in American Coot

**April Barillas**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

I observed American Coots at the Arcata Marsh and Humboldt Bay National Wildlife Refuge for 10 minutes based on foraging and vigilance in a group or individual.

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## Foraging Success of American Robins (*Turdus migratorius*) in Pasture Conditions

**Sara Dabovich**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

My research project investigated success American Robins (*Turdus migratorius*) as predators in livestock pastures. Using random focal sampling and critical behavior incidence recording I obtained percent of successful attempts in moderately and over grazed pastures made by male and female birds.

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## Freedom of Speech

**Barbara Singleton**, Sociology, Undergraduate Student

### College of Arts, Humanities & Social Sciences

This case research project explains the relevance of Bond v. Floyd in relation to senators and the Freedom of speech doctrine.

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## Gender Equity in Wildlife Publishing: A census of 22 years of publishing in the Journal of Wildlife Management.

**Rebeca Becdach**, Wildlife, Graduate Student

### College of Natural Resources & Sciences

Various studies have documented gender inequity in scientific fields, including medicine, computational biology, the physical sciences, and ecology. A clear indicator of this bias can be seen in the disparity between men and women authorship of scientific papers. This study describes gender diversity in wildlife publishing across institutions, countries, and study species taxa in recent decades. We reviewed all research articles published in the Journal of Wildlife Management from 1999 to 2020 and collected author names and affiliations. We classified the gender of each author using Genderize.io, and calculated the men:women ratio of first and co-authors over time.

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## Giant Serpents of Humboldt

**Luis Penick**, Geography, Undergraduate Student

### College of Arts, Humanities & Social Sciences

My topic is a history of giant serpent folklore within Humboldt county and how and why it evolved. Covering how and why the folklore formed in the first place, and how and why has the folklore changed throughout time. This includes how it relates to other serpent folklore and why it is special and unique compared to different regions' folklore on serpents. To support my topic I am trying to briefly touch on why are serpents/snakes are so prevalent in folklore, what makes Humboldt a likely place for such a deep serpent mythos, what real life creatures sparked inspiration

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## Golf Club of Cal Poly Humboldt

**Alexandria Monney**, Recreation Administration, Undergraduate Student

### College of Professional Studies

I chose to initiate this organization because I have the passion, credibility, and experience to instruct and coordinate groups of people regarding anything to do with the game of golf. I have always yearned to play the game of golf with others of my age too, which made me believe that there must be students that feel the same. There are also limited opportunities for students who play the game of golf because there is no existing club or sports team associated with the university. Lastly, nearby golf courses have great discounts for college students that could be better utilized.



## Green Goal Fútbol

**William Krengel**, Kinesiology & Recreation

Administration, Undergraduate Student;

**Billy Salazar**, Kinesiology & Recreation

Administration, Undergraduate Student

### College of Professional Studies

Our Spring 2023 Senior project is an event that invited the community to a 5 vs 5 soccer tournament in Arcata. The event took place on Saturday, April 22nd on the College Creek soccer field at Cal Poly Humboldt. Using a large facility like this outdoor soccer field gave us the opportunity to host a large number of participants, providing a safe and equal environment to play with others. One of the objectives of Green Goal Fútbol was to create an accessible all inclusive event on campus to bring people together and have fun. We are hoping that people's memories of the event will inspire others to host similar events in the future.



## Habitat Selection of Northern Harriers in Grasslands and Coastal Wetlands in Humboldt County, CA

**Riley Sullivan**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Habitat selection is a well-studied behavior that strongly influences how a species interacts with the surrounding ecosystem. Countless studies address the habitat selection of raptors in the interest of conservation, but the habitat preferences and selection of the Northern Harrier specifically are poorly studied. I conducted a series of point counts between the Arcata Bottoms and the Arcata Marsh to compare the rate of Northern Harrier sightings between each zone.



## Harnessing the Power of Open Pedagogy for Collaborative and Innovative Education

**Juergen Riedelsheimer**, Psychology, Graduate Student

### College of Arts, Humanities & Social Sciences

This presentation will explore how open pedagogy can transform students from passive knowledge consumers to active knowledge producers. The use of active learning approaches, which emphasize student-centered and collaborative learning, has been shown to improve learning outcomes and engagement. Project-based and experiential learning can equip students with critical thinking and problem-solving skills to apply in real-world situations. This presentation will provide examples of successful implementations and discuss the challenges educators may face when moving towards a student-centered, knowledge-producing model.



## Honor Our Elders

**Josh Ringland**, Social Work, Graduate Student

### College of Professional Studies

Older adults are a growing population in the United States and many elders suffer from physical, sexual, mental, isolation and financial abuse without any obvious signs. Through the research and evaluation of a growing number of elder abuse cases, Humboldt County's Civil Grand Jury issued a report, Silver Tsunami Warning, explaining the concerns of elder abuse. Through this community project, my community partner, Adult Protective Services and I will bring mindfulness of elder abuse through promoting World Elder Abuse Awareness Month, advocate prevention of elder abuse, and educate how to report elder abuse through a visual campaign of banners advertised throughout Humboldt County.



## How Anthropogenic Disturbance Affects Terrestrial Wildlife Use and Presence in a California Coastal Dune Ecosystem

**Joshua Zastrow**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

My research looks at the influence of anthropogenic (human) disturbance upon the terrestrial mammalian community. The specific anthropogenic variables that I tested for against wildlife presence, use-rates, and species richness was human use intensity, human and domestic animal use intensity, building density (per mile), and distance to major roadway. The study area completed between February 20th and April 5th, 2023, within Humboldt County, California, USA. The transects were placed parallel to the coastline along an area of rural suburban, lite industrial, agricultural, and wildlands, within a coastal dune ecosystem.



## Humboldt County GIS Archive

**Liam del Aguila**, Computer Science, Undergraduate Student

### College of Natural Resources & Sciences

This project is a webpage and potentially touch-screen kiosk which displays GIS datasets currently held by the school. This includes student and faculty projects concerning a variety of geographic data about Humboldt County. The Alpha version of this website is currently in development in coordination with the library and geospatial faculty at Cal Poly Humboldt.



## Humboldt County Homeless College Student - Photovoice Project

**Maia Miglio**, Social Work, Undergraduate Student

### College of Professional Studies

The Homeless College Student Photovoice Project unveils the resiliency of Humboldt students. From living in cars to showering at public campsites, learn about the challenges homeless students face. This digital gallery utilizes various mediums. Photos, recorded stories, and transcripts are available for interaction. Information is disseminated

from 2018 research by Pam Bowers and Marissa O'Neill. A submission board for personal stories is available, in light of recent protests and events. This gallery of growth and strength hopes to inspire change within our community.



## Humboldt County Postpartum Needs Assessment: Life After Birth

**Elisa Miller**, Social Work, Graduate Student

### College of Arts, Humanities & Social Sciences

It is estimated that one in every five women experiences a mental health disorder like Postpartum Depression or Anxiety after giving birth. Humboldt County is one of the 35 out of 61 counties in CA that have recognized Perinatal Mental Health disorders as an issue. In order to improve postpartum care in Humboldt County a needs assessment was conducted of people who have given birth in Humboldt County over the last 10 years. Two Zoom storytelling focus groups of 6 people each and seven individual interviews were conducted. A thematic analysis of the data was conducted and presented in a report along with several recommendations.



## Hummingbird Aggression and Use at Artificial Feeders with Varying Sugar Concentrations

**Aviva Saadatfar**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Territorial hummingbirds often display aggressive behaviors to gain access to high-quality food sources. Previous studies have found that hummingbirds prefer to feed from feeders that have sugar concentrations that are slightly higher than regular flower nectar concentrations (20-25% sugar). However, to maximize their energy intake, hummingbirds may not always choose artificial feeders with the highest sugar concentration available to them. I used artificial feeders with varying sugar concentrations to determine if hummingbirds display more aggression and/or spend more time at feeders based on their sugar concentrations.



## Identifying Pleistocene Ursus fossils from dental morphology analyses of American black bear (Ursus americanus) and brown bear (Ursus arctos) specimens

**Tananya Alberts**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

This project aimed to use black and brown bear teeth measurements in order to see if species identifications can be made for fossil bears. Using specimens across four Californian natural history museums, we found that one tooth measurement was sufficient to identify between the two species.



## Improved Measurement of the Newtonian Gravitational Constant G

**Alexandra Papesh**, Physics & Astronomy, Undergraduate Student

### College of Natural Resources & Sciences

The Newtonian gravitational constant, G, is one of the oldest known fundamental constants in nature, and yet it is known with the least precision of all other fundamental constants. The research group at IUPUI, in collaboration with Cal Poly Humboldt, will use multiple approaches within a singular torsion pendulum apparatus to precisely determine G. Specifically, measurements will be made using the angular acceleration feedback and time of swing methods in the same apparatus, which was carefully designed for reduced error in both techniques. We expect to obtain a measurement at the 2 ppm level using these new methods.



## Improving Quality of Care for Advance Cancer Patients in Rural Communities

**Robyn Jensen**, Nursing, Undergraduate Student

### College of Professional Studies

Numerous obstacles prevent rural residents from accessing high-quality cancer treatment, such as long distances to treatment centers, a shortage of specialized medical professionals, and inadequate health-care infrastructure. To address the challenge of advanced cancer care in rural areas, a comprehensive approach is required that includes improving access to specialized medical professionals, investing in healthcare technology, and prioritizing palliative care services. Palliative care is a critical element of cancer care that focuses on symptom management, enhancing quality of life, and providing support for patients and their loved ones.



## Influence of Urban Land Use on Avian Diversity in Eureka, CA

**Emma McGraw**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

The objective of my research is to test if there is any correlation between avian diversity and preserved green areas in Eureka, CA. Additionally, how does the vegetation composition of these parks compare to the avian diversity. I visited a total of 30 sites including 15 urban parks or green areas, and 15 urban sites paired with each of the green sites, to see how diversity compared in the surrounding urban habitat. Using avian abundance and species richness data I collected, I calculated the Shannon Diversity Index (H') of each site. Overall, I observed significantly higher avian diversity at green sites and found positive correlation between avian diversity and plant species richness.

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## Invasive Plant Species Removal: Volunteering with Sue-Meg State Park

**Mason Gardner**, Politics, Undergraduate Student

### College of Arts, Humanities & Social Sciences

Non-native species come to Humboldt county when small patches are washed up on beaches, hitch rides on ships and cars, or escape from someone’s garden. Some of these species are considered invasive, and rapidly take over the landscape. Once they establish, they starve native species of resources like light and water, and out-compete them for surface area on the ground. They also harm native animals by replacing their food sources, harming them, or changing the landscape in which they live. Volunteering with the Invasive Plant Removal Team at Sue-Meg State Park, I had firsthand experience examining and removing these species across Humboldt County.

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## Invertebrate Biomass Effects on Abundance and Foraging Behavior of Dabbling Ducks

**Mary-Kate Reed**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

My study assessed how invertebrate biomass effects the abundance and foraging behavior of the American Green-winged Teal and the Mallard in the restored Tidal habitat of the Arcata Marsh and Wildlife Sanctuary.

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## Junior Monitors Project

**Taevia Salazar**, Social Work, Graduate Student;

**Nat Kubo**, Social Work, Graduate Student

### College of Professional Studies

The Junior Monitor project aimed to promote social and emotional learning and peer conflict resolution at Alice Birney Elementary and Lafayette Elementary through the implementation of an eight-week curriculum consisting of once-weekly 30-minute group sessions. The curriculum was designed in collaboration with my project partner, community partner, and school principals. It was focused on using restorative justice practices, relational accountability, and peer mentoring to address conflict on the playground.

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## Land-Based Healing Toolkit

**Sara Goodrich**, Social Work, Graduate Student

### College of Professional Studies

The land-based healing toolkit contains 16 therapeutic interventions, written in service of Sorrel Leaf Healing Center’s vision of serving young people and their support people towards healing. The toolkit draws on ecotherapy, dialectical behavioral therapy and the Work that Reconnects. Its purpose is to connect young people and their support people

to themselves, the earth, and each other. The project is space-specific, drawing on the ecosystems and seasons of Humboldt County. The toolkit is an open resource available to the community via Sorrel Leaf Healing Center (SLHC).

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## Likelihood of agonistic behavior by gull species in Humboldt County based on relative body size

**Conor Somerville**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

This project is a behavioral study on 4 gull species of Humboldt County. Their agonistic behavior was studied, comparing the frequency of agonistic behavior toward members of other species based on relative body-size. This value was compared with the number of birds of each relative size they had access to. I found that most gulls tended to target members of their own species disproportionately, but Western gulls disproportionately targeted members of other species that were larger and smaller in size. This may have implications on gull behavior and management.

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## Local Native 2SLGBTQ+ Youth Photovoices in Humboldt, CA

**Jose Moreno**, Social Work, Undergraduate Student

### College of Professional Studies

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## Lost Luggage and Lost Memories: The Southwest Airlines Meltdown of December 2022

**Ara Pachmayer**, Kinesiology & Recreation Administration, Faculty;

**Joe Watson**, Kinesiology & Recreation Administration, Undergraduate Student;

**Billy Salazar**, Kinesiology & Recreation Administration, Undergraduate Student;

**Brenden Barry**, Kinesiology & Recreation Administration, Undergraduate Student;

**Skye MacLachlan**, Kinesiology & Recreation Administration, Undergraduate Student;

**Josh Martin**, Kinesiology & Recreation Administration, Undergraduate Student;

**Alexandria Monney**, Kinesiology & Recreation Administration, Undergraduate Student;

**Aris Valerio**, Kinesiology & Recreation Administration, Undergraduate Student

### College of Professional Studies

In this joint project, students from REC 315 Travel Industry Management researched the Southwest Airlines (SWA) flight disruption that happened in December 2022. Considering both the causes and the outcomes of the event, a variety of issues are explored including lost luggage liability, antiquated technology used by SWA, airline structure, customer sentiment, economic impacts, human resources and steps to take to avoid in the future.

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## Lunar Illumination as an Indicator for Black-tailed Deer Activity

**Austin Nolan**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

This is a study that aims to test a widespread local theory that Black-tailed deer are more active on nights with a full moon.

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## Mahanoy Area School District v. B.L.

**Raul Roman**, Politics, Undergraduate Student

### College of Arts, Humanities & Social Sciences

My presentation is regarding the 1st Amendment, in which a student expressed her frustration on social media off campus regarding the selection of the varsity cheer team. She sued the school after the coach suspended her from the team for a year due to her post on social media. Case brief regarding the extend of the 1st amendment and regulation a school may do.

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## Managing Pain to Avoid Opioid Misuse

**Nicholas Terrill**, Nursing, Undergraduate Student

### College of Professional Studies

This Capstone research project dissects the complexities of chronic pain management and pushes for a system wide move away from opiate dependency. This project proposes interventions such as CAM therapy, ERAS and PPACT to battle chronic pain, avoid opiate misuse and over prescription within the healthcare system.

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## Mapping the Cellular Origins of Atherosclerotic Plaque

**Hannah Cornwell**, Biological Sciences, Undergraduate Student

### College of Natural Resources & Sciences

Atherosclerosis is a chronic inflammatory disease causing plaque formation in arteries, leading to morbidity and mortality. Smooth muscle cells may contribute to plaque formation, but the exact origin remains unknown. Researchers can analyze smooth muscle cell function using histology, spatial transcriptomic analysis, and CODEX protein visualization. Using lineage tracing models with Rainbow mouse reporter lines, they can study cell fate and phenotypic shifts, identifying possible targets for disease tracking and modification to improve disease progression.

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## McGirt v. Oklahoma: the case that showed America how to give power back to the tribes

**Rainer Shea**, Politics, Undergraduate Student

### College of Arts, Humanities & Social Sciences

This poster’s goal is to explain, through simple presentation of facts, how the legal framework established by the 2020 Supreme Court case McGirt v. Oklahoma represented a working example of how the United States can give power back to the tribes. Namely, by recognizing all the traditional territories of the tribes as Indian country, subject to the jurisdiction of the tribes rather than to that of the U.S. government.

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## Meet & Eat Sessions

**Julia Top Gasca**, Social Work, Graduate Student

### College of Professional Studies

Meet and Eat was a project created to educate high school students from grades tenth to twelfth. Workshops were created to educate students about what options they have post graduation. Examples consisted of helping students understand how to apply for FASFA, job resources available to students, and learning about resources on college campuses as well as learning about the benefits of a 2 year and 4 year college. This project took place in Del Norte County’s school district and was open to students within the McKinney Vento and Foster Youth program.

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## Mental Health - Medication Compliance in Corrections

**Darin Straub**, Nursing, Undergraduate Student

### College of Professional Studies

The purpose of this project is to help increase inmate adherence to mental health medications during incarceration to decrease the duration of incarceration as well as decrease return incarcerations.

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## Mesocarnivore Responses to Visual Lures In Freshwater, California

**Adeline Tealle**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

This study sought to understand the effects of a visual lure on mesocarnivores at camera trapping stations. By fashioning a lure from fur, feathers, and tinsel, I placed the lure in front of 5 randomized cameras along with 5 cameras with no lure. The cameras were placed along a 150 meter long transect on an active game trail in Freshwater, CA. 9 species of mesocarnivore were detected, and 5 species with larger sample sizes were included in analysis of interest towards the lure, time spent at camera stations, and relationships between species in response to the lure.



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## Micrographic insights of etiological agents in Pacific oysters

**Victoria Cifelli**, Biological Sciences, Graduate Student

### College of Natural Resources & Sciences

Infectious diseases pose major threats to not only human health but economic sustainability and wildlife conservation. Within the realm of infectious disease, is co-infection, which is prevalent in the wild. *Magallana gigas*, commonly known as the Pacific Oyster, contends with Ostreid Herpesvirus (OsHV-1) every summer during what are called summer mortality events or Pacific Oyster Mortality Syndrome (POMS). These mortality events can cause up to 90% mortality in farmed populations every year. These summer mortality events are caused by a co-infection of OsHV-1 and varying *Vibrio* species. Without bacteria, OsHV1 does not allow for full expression of the disease therefore higher OsHV-1 would correspond to higher *Vibrio* abundance. The purpose of this study is to compare the gill topography and presence of bacteria in gill tissues that are healthy versus infected with OsHV-1. Along with this, OsHV-1 is identified in gill samples via TEM

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## Microhabitat Selection in the Wandering Salamander (*Aneides vagrans*)

**Noah Morales**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

An evaluation of characteristics of tree stumps that make them conducive for the presence of the Wandering Salamander (*Aneides vagrans*). I looked at stump diameter, the relative abundance of cracks on the stumps, and the amount of surface and canopy cover around the stumps to determine if wandering salamander abundance is correlated with any of those variables.

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## MMA Corrective Bilateral Imbalance Study

**Aubert Marcu**, Kinesiology & Recreation Administration, Undergraduate Student

### College of Professional Studies

Muscular imbalances are common in mixed martial arts (MMA) fighters and can decrease performance and increase injuries. This study aims to investigate the effects of fixing muscular imbalances of MMA fighters. The experiment will consist of 20 MMA fighters assigned to either an intervention group or control group. The intervention group will receive an 8-week program targeting their muscular imbalances. Pre- and post-intervention measures will be assessed. This research highlights the importance of addressing muscular imbalances in MMA fighters to improve their overall performance and reduce the risk of injury.

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## Modeling Environments of the Ancients

**Daniel Hodges**, Computer Science, Undergraduate Student

### College of Natural Resources & Sciences

Modeling environment probability map of ancient settlements using Geospatial computer software

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## Morphometric Differences of the Sacramento Pikeminnow (*P. grandis*) in Non-native vs. Native Habitat

**Jessica Calderon**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Invasive species disrupt ecosystems and can lead to complex food web issues and increased probability of extinction for native species. The Sacramento pikeminnow (*P. grandis*) is invasive in the Eel River of Humboldt county and has contributed to the decline of species that local communities rely on, such as the Chinook salmon and the Pacific lamprey. This study explores the morphometric differences of the Sacramento pikeminnow within native and non-native ranges.

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## Northern Harrier Foraging Modes in Habitats Around Humboldt Bay

**Collin Silva**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Northern harriers are generalist predators known to occupy and forage over a variety of wetland and grassland types in North America. Whether Northern harriers adapt their foraging modes over different habitat types to maximize their success and energy intake is not known with any confidence. This study addresses this knowledge gap on a small scale around Humboldt Bay at various wetland and grassland sites.

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## Oh Sh\*t! Roosevelt Elk Spread Invasive Plants

**Elizabeth Luttrell**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Invasive plants and Roosevelt elk play important roles within an ecosystem, but knowledge on their interactions and ungulates roles as seed dispersers are limited. This study looked at Roosevelt elk in Humboldt County and if their pellets germinated plants, specifically invasive or native.

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## Physiological And Psychological Differences Between 20% Grade Incline Walking And Level Grade Jogging At Isocaloric Intensity

**Motoki Sato**, Kinesiology & Recreation Administration, Graduate Student

### College of Professional Studies

Although the benefits of physical activity are well established, many adults do not meet the recommended weekly aerobic physical activity guidelines. Internal barriers such as enjoyment and affective response may challenge engagement and adherence of exercise. While walking and jogging are common modes of exercise, incline walking has recently gained popularity. Therefore, this study aims to compare physiological (fat and carbohydrate utilization) and psychological (enjoyment, affective response, rating of perceived exertion) differences between 20% incline walking and level grade jogging at isocaloric intensity.

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## Plant-Dwelling Spiders Care Where They Live: Higher Diversity and Greater Abundance On Native Plant Species, Specific Plant Types, and in Areas With Vegetation Richness

**Brooke Culler**, Biological Sciences, Undergraduate Student

### College of Natural Resources & Sciences

Spiders are very effective biocontrol agents, particularly when their communities are more diverse. In the progression of more sustainable and natural agriculture, supporting spider communities in California vineyards has potential to keep vines safer from pests. I decided to observe spider taxonomic and guild richness, as well as abundance, on crop and non-crop vegetation in vineyards, while recording a site's plant species richness and assigning each of those species to be native or not. I set out to determine what factors support more spider diversity, and ultimately, how those factors may encourage spider communities on the vines themselves.

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## Post-Wildland Fire Prescribed Burning: Regeneration of Ponderosa Pine and Changes in Fuel Loads Following the Jasper Fire

**Cristina Winters**, Forestry, Fire & Rangeland Management, Undergraduate Student

### College of Natural Resources & Sciences

As high-intensity wildland fires occur more frequently and increase in size, the occurrence of reburn in burn scars is also increasing; however, the ecological effects of such reburn in Western coniferous forests are not well understood. Post-prescribed fire, we investigate the changes in woody fuel loads in high and moderately burned areas of the 2000 Jasper Fire and the patterns of ponderosa pine regeneration survival in those areas. Our findings can inform a management plan to restore historic heterogeneity in the Black Hills, a culturally and economically important region of the U.S., and increase resistance and resilience to climate change.

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## Pre Counseling for Enhanced Recovery After Surgery

**Ana Lilia Alaniz**, Nursing, Undergraduate Student

### College of Professional Studies

Following the plan for Enhanced Recovery After Surgery (ERAS) has many benefits for the post-operative patient. Pre-surgery counseling helps overcome some barriers that can prevent the ERAS pathway from being implemented. Addressing and including the patient in their post-operative care will increase the likelihood that patients will be compliant with the pathway. The ERAS pathway is designed to standardize and optimize post-operative care. Education during the preoperative period is essential to increasing the success and implementation of the protocols.

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## Raccoon (*Procyon lotor*) Trash Can Use in Relation to Distance from Dining

**Haley Fowler**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Raccoons have been observed around the campus of Cal Poly Humboldt, particularly in the trash cans. In this study, I tested how distance from dining resources affects raccoon trash can use. I predicted that trash cans closer to dining resources would be visited more often than other trash cans. My results indicated that trash can location in relation to dining resources did not impact the number of visits.

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## Rapid Response Teams in Rural Hospital Settings

**Tanner Broadstock**, Nursing, Undergraduate Student

### College of Professional Studies

Rapid Response Teams are a resource for hospitals to provide early and emergent interventions to prevent the need for escalation of care. Team members can be called upon by units in the hospital for consultation and assist with assessments. Teams provide a proactive rounding process on patients with high-risk diagnoses to follow along with the bedside nurse to provide an interdisciplinary approach to a complex patient. Rural hospitals are challenged with retaining highly experienced nurses, these teams provide insight and mentorship to newer nurses.

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## Re-creating Ancient Egyptian Bread: An Experimental Archaeology Project

**Ellen Durkee**, Anthropology, Undergraduate Student

### College of Arts, Humanities & Social Sciences

This project attempts to re-create the taste of ancient Egyptian bread. It began with a successful attempt to create a sourdough starter. Emmer wheat, one of the main grains cultivated by ancient Egyptians, was used as the flour for the bread. The overall project to create ancient Egyptian bread was also successful. Further experiments would help achieve the goal of re-creating the accurate style of ancient Egyptian bread by focusing on re-creating the conical mold it was baked in.

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## Recreational Trail Impacts on Presence and Abundance Patterns of the California Slender Salamander (*Batrachoseps attenuatus*) in the Arcata Community Forest, CA

**Rashel Cazares-Navarro**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

My project aims at understanding how recreational trails have shaped terrestrial salamanders' presence and conditional abundance in the Arcata Community Forest. In this project, I aim to answer if hiking trails affect the presence and abundance patterns of the California Slender Salamander (*Batrachoseps attenuates*). To address my question, I conducted my research in two months, from February to April, at the

Arcata Community Forest. I conducted my research on two different trails. The first is the Short Trail (0.11 miles), and the second is Redwood Park Trail (0.28 miles). This information is crucial to the conservation and management of salamanders as they are an indicator species.

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## Red-Tailed and Red-Shouldered Hawk Habitat Usage Throughout Humboldt County

**Pouya Kazemi**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Studying if the habitat type has an effect on the what age hawk will be using that territory, either adult or immature. Looking at four habitat types, open, forest, urban and water. There was no significance in habitat type in relation to age.

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## Redwood Coast Beer Trail

**Matthew Gerber**, Kinesiology & Recreation Administration, Undergraduate Student

### College of Professional Studies

From the primitively-brewed 'steam beer' of 19th century Eureka taverns, to the nano-brewed Hazy DIPA in a Crescent City warehouse today - brewing culture remains a key social element and economic driver in Northern California's Redwood Coast. The Redwood Coast Beer Trail is an experiential destination marketing campaign that applies the principles of gastrotourism to advertise the robust craft brewery scene of Humboldt and Del Norte counties as distinct tourism assets. The Redwood Coast Beer Trail poster is a self-guided, self-paced wayfinding aide that empowers local and non-local visitors to experience the unique oddities and attributes of the region's craft beer and cider producers.

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## Risk of Concussion Based on Position in Men's and Women's Collegiate Soccer

**Devin Hauenstein**, Kinesiology & Recreation Administration, Graduate Student

### College of Professional Studies

Identification of correlations between rates of concussion and soccer positions played will lead to improved safety protocols and athlete health. Improvements can be identified by understanding the minutes played per position as fatigue is a risk factor for obtaining a concussion, in training or in game conditions by men and women soccer players. PURPOSE: To determine whether a correlation exists between minutes of soccer played, soccer position played, and the incidence of concussion among men and women collegiate soccer players.

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## Rolling with Pollies: Soil Moisture effect on Recovery from Conglobation in the Common Pill Bug, *Armadillidium vulgare*

**Jade Coulter**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Pill bugs roll into a ball for more reasons than to protect themselves! They may also be conserving water, thermoregulating, or it may all be up to individual boldness. My research investigated whether soil moisture would affect the amount of time it took for pill bugs to unroll. I found that there was no correlation between sex, length, soil moisture, and the amount of time they spent rolled up. However, there was a great variation among individuals.

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## Salamander activity: The impact of abiotic factors on salamander movements in Northern California

**Luke Leuty**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

This poster focuses on studying the relationship between abiotic factors and salamander activity. We predict soil saturation to be the biggest factor influencing salamander activity. We also examine soil temperature, air temperature, daily precipitation, and accumulative precipitation and their affects on salamander activity.

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## Salamander Habitat Abundance Based on Water Flow

**Chris Vignery**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

A study related to finding out a relationship between the abundance of salamanders and the flow of water in the Arcata community forest.

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## Salamander occupancy according to log shape and condition in Humboldt County

**Riley Tetzlaff**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

For my research project I studied whether or not the shape and condition of a log affected the occupancy rate of salamander, and according to my data I was half right.

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## Sand Crab, *Emerita analoga*, Burrowing Time in Relation to Relative Abundance in Humboldt County

**Andrew Cha**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Finding the relation between grain size and burrowing time of sand crabs at study sites of Samoa, Mad River, Moonstone, Clam and Trinidad state beach. Relative abundance is measured at each study site to determine if there is a correlation between grain size, burrowing time and habitat selection.

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## Scavenging Efficiency in Turkey Vultures (*Cathartes aura*) at Forested Sites

**Ephraim Lowe**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Turkey vultures are well known for their incredible sense of smell due to their large olfactory bulbs, which are even larger than some mammals, such as rats. The study conducted compared the olfaction ability of turkey vultures to local mammals in the area by baiting sites in the Arcata Community Forest with carrion. It analyzed which species arrived to carrion sites first, and how weather, temperature, and humidity affected their ability to locate carrion efficiently.

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## Sculpture Walk Spring 2023

**Sondra Schwetman**, Art, Faculty

### College of Arts, Humanities & Social Sciences

Sculpture Walk in the Library - students will display their art work on pedestals on the first floor of the library.

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## Seasonal Change in Foraging Behavior of Long-billed Curlew (*Numenius americanus*)

**Elena Adams**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

This study aimed to measure the proportion of time that long-billed curlews (*Numenius americanus*) were actively feeding, preening, roosting, walking, flying, or defending their territory. I hypothesized that the proportion of time that curlews were actively feeding would increase as they prepared for migration. Surveys were conducted along Humboldt Bay's Elk River to determine if the proportion of time curlews were observed feeding increased from February to April 2023. Understanding foraging response is critical to understand the importance of winter habitats for this species.

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## Self Determination Theory-Based Exercise Program for Individuals with Intellectual Disability

**Yaxeny Moreno**, Kinesiology & Recreation Administration, Graduate Student

### College of Professional Studies

The purpose of this study was to determine the impact of the three major components of self-determination theory (autonomy, relatedness, and competence) within a structured exercise program on the exercise performance of an adult with a disability. The study was conducted in the Student Recreation Center (SRC) with accessibility to the field house and the gym at Cal Poly Humboldt during a 6 week program. This study measures the total walking distance performed within 6 mins, as well as the number of push-ups, and the number of sit-ups performed in separate 1-minute opportunities.

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## Self-Determination Theory and Adapted Physical Education

**Zachary Norton**, Kinesiology & Recreation Administration, Graduate Student

### College of Professional Studies

This research evaluates the success of utilizing Social Determination Theory (SDT) principles in an exercise program for disabled persons. According to SDT, social environments are essential for people to have autonomy, relatedness, and competence, which are essential for motivating exercise. In this study, the researcher looked into the exercise performance of an adult with Down Syndrome over a 6-week program held in a recreation facility in Northern California. The independent variables tested were walking, modified push-ups, and curl-ups. The findings of the study add to the existing literature on the efficiency of applying SDT for programming that caters to people with disabilities.

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## Self-Determination Theory and Down Syndrome

**Peggy Manuelita Scarborough**, Kinesiology & Recreation Administration, Graduate Student

### College of Professional Studies

The purpose of this study was to determine the impact of self-determination theory and structured exercise program to increase exercise performance for two adults with Down syndrome.



## Self-Determination Theory and Fragile X Syndrome

**Marcus Romero**, Kinesiology & Recreation  
Administration, Graduate Student

### College of Professional Studies

This study provides insight into the Self-Determination Theory with a participant with Fragile X syndrome and Autism Spectrum Disorder. This study utilized a single-subject research design which measured the exercised performance by looking at walking distance, push-ups, and curl-ups over five weeks.



## Self-Determination Theory and Intellectual Disability

**Jacquelyn Matthews**, Kinesiology & Recreation  
Administration, Graduate Student

### College of Natural Resources & Sciences

The purpose of this study was to increase physical fitness skills within adult populations with intellectual disabilities in the areas of walking, push-ups, curl-ups through a self-determination model. This was achieved through collaborative engagements with graduate-level students. Within this collaboration participants chose exercise goals and success criteria. An exercise program was established to increase participant skills over five sessions and teach participants how to be independent in their physical fitness endeavors and environments. The goal was to determine if experiences within this study would lead to increased skill level surrounding physical fitness through SDT.



## Self-Determination Theory in Autism Spectrum Disorder

**Juliana Jamison-Espinoza**, Kinesiology & Recreation  
Administration, Graduate Student

### College of Professional Studies

This research aims to explore the efficacy of using Social Determination Theory (SDT) principles with an exercise program for individuals with disabilities. The SDT theoretical framework highlights the importance of social environments to support individuals' basic psychological needs such as autonomy, relatedness, and competence as it relates to exercise motivation. In the study, the researcher measured the exercise performance of an adult with Austum during a 6-week program hosted at a recreation facility in Northern California. The independent variables measured included walking, modified push-ups, and curl-ups.



## Self-Determination Theory in Individuals with Disabilities

**Tylor Davis**, Kinesiology & Recreation  
Administration, Graduate Student

### College of Professional Studies

This research aims to explore the efficacy of using Social Determination Theory (SDT) principles with an exercise program for individuals with disabilities. The SDT theoretical framework highlights the importance of social environments to support individuals' basic psychological needs such as autonomy, relatedness, and competence as it relates to exercise motivation. In the study, the researcher measured the exercise performance of an adult with a disability during a 6-week program hosted right here at Cal Poly Humboldt! The independent variables measured included walking, modified push-ups, and curl-ups. Special thanks to everyone who contributed to this program's success.



## Short and Long Term Effects of Antibiotic Treatment on Mitochondrial Membrane Potential and Proliferation of HEK293 Cells

**Rhiannon Red Bird**, Biological Sciences, Undergraduate Student;  
**Nate Krause**, Biological Sciences, Undergraduate Student

### College of Natural Resources & Sciences

Antibiotics are commonly used in modern-day cell culture to prevent the loss of valuable data, cells, reagents, times, and efforts. Animal cells are cultured in nutrient rich media, which can cause the rapid proliferation of unwanted contaminants such as viruses and bacteria. Although there are many advantages to culturing cells in antibiotics, such as protecting valuable cells during long-term studies, it has been found that short term treatment affects stem cell differentiation, cell proliferation, gene expression, cell signaling, regulation and metabolism. Yet, they are still commonly used in cell culture. In this study, we cross-examined the effects of short term antibiotic treatments (96 hours) and long term antibiotic treatments (192 hours) on human embryonic kidney cell (HEK293) proliferation and mitochondrial membrane potential.



## Sorrel Leaf Healing Center Mental Health 101 Training & Coping Skills Toolbox

**Ashly Kloiber**, Social Work, Graduate Student

### College of Professional Studies

This project consisted of two deliverables. The first is a digital Canva presentation that will educate Sorrel Leaf Healing Center non-clinical staff on the basic neuroscience behind trauma and how trauma connects to behavior and diagnosis, in addition to addressing cultural considerations and incorporating mental health first aid concepts. The second deliverable is a toolbox that provides coping skills interventions for staff to use with residents that assist with co-regulation.



## Soulmates Within Primates

**Michael Szyndler**, Anthropology, Undergraduate Student

### College of Arts, Humanities & Social Sciences

This poster is about the potential future research within the primatology field, specifically within the studies of pair bonding between Titi monkeys, Owl monkeys, and Gibbons. This project shows the conclusive evidence of pair bonding done already and what it entails and what the outcomes are. The project also includes information on these species as well as a breakdown of what pair bonding is and why it is important.



## Spectral Analysis of Currents in Humboldt Bay

**Taylor Juchau**, Oceanography, Undergraduate Student;  
**Karina Bernbeck**, Oceanography, Undergraduate Student;  
**Noe Camarillo**, Physics & Astronomy, Undergraduate Student;  
**Steven Gracy**, Physics & Astronomy, Undergraduate Student;  
**Emma Modrick**, Oceanography, Graduate Student;  
**Tamara Barriquand**, Oceanography, Faculty

### College of Natural Resources & Sciences

Our purpose is to analyze the ADCP (Acoustic Doppler Current Profiler) data from the PORTS Hookton Channel Day Marker 3 station in Humboldt Bay, CA, to compare with the analysis of the ADCP data at the PORTS Chevron Pier station done by Emma Modrick and Isabelle Marcus (Modrick et al., 2022). We want to determine the proportion that each tidal component makes to the mixed semidiurnal tides in the bay, by looking at the dominant frequencies in the tidal currents. We will then compare our results with those of Modrick and Marcus, as well as with the published results of the National Oceanic and Atmospheric Administration (NOAA).



## Spotted Banana Slugs, Ariolimax columbianus, and Canopy Cover

**Sasha Milstein**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Numerous animal species display diverse colorations as a means of performing cryptic coloration, which protects them from predation. In the case of banana slugs, some individuals exhibit monochromatic hues, while others display spots. The purpose of my study was to answer if some banana slugs are spotted to perform cryptic coloration as a means of anti-predator defense.



## Strategies to Lower Risk in the Management of Acute Aggression

**Luz Gomez**, Nursing, Undergraduate Student

### College of Professional Studies

Acute aggression poses a risk of harm to patients and staff in acute care. On one hand, disparities in the management of aggression are well documented, with factors like race affecting the likelihood of restraint use. However, agitation is also a leading cause of staff injury,

with the majority of such injuries occurring during the application of restraints. Using the Model for Evidence-Based Practice Change, this project aims to implement an aggression order set modeled after the Project BETA (Best Practices in the Evaluation and Treatment of Agitation) guidelines. With this approach, duration of restraint application and incidence of staff injury will decrease by 50% over the next year.



## Streams Across Landscapes (SAL): A new method for modeling stream flow in small watersheds

**Jim Graham**, Environmental Science & Management, Faculty

### College of Natural Resources & Sciences

Streams Across Lands (SAL) is a new stream flow modeling method for small watersheds. SAL is based on standard hydrological equations for water flow on the surface, through soil, and in stream channels. The model can be used with standard spatial datasets including Soil Survey Geographic Database (SSURGO, NRCS) and National Land Cover Data (NLCD). SAL was tested primarily within the Elder Creek watershed and showed a high level of correlation with the observed discharge at the USGS station. SAL includes an easy-to-use graphic interface within the BlueSpray GIS application and provides a variety of graphic outputs for use in watershed analysis and community outreach.



## Suicide Safety Plan

**Alyssa Lawrence**, Social Work, Graduate Student;  
**Kristin Ciapusci**, Social Work, Graduate Student

### College of Professional Studies

We collaborated with Dr. Bayan at Waterfront Recovery Services to create a post-discharge safety plan for patients. The safety plan will be used and implemented on each individual client to reduce substance use and create a life of sobriety.



## Summative Evaluation for Cal Poly Humboldt's 2022 Summer Algebra Institute

**Rose Francia**, Education, Staff;  
**Christine Castro**, Staff;  
**Irene Gonzalez-Herrera**, Staff;  
**Samantha Diel**;  
**Miguel Sagrero**, Undergraduate Student

### EOP & TRIO Programs, Talent Search

For the second consecutive summer, Cal Poly Humboldt's CSU Summer Algebra Institute's (SAI) goal was aimed at demystifying Science, Technology, Engineering, Arts, and Mathematics (STEAM) related projects, majors, and careers, to further increase Humboldt, Del Norte, and Mendocino County BIPOC (6th-12th grades) students' interests in pursuing majors and careers in STEAM, and minimize learning gaps in mathematics. Students who enrolled in the virtual 2022 SAI, a 4-week

program, completed a minimum of 57 hour intensive individualized Mathematics course using EdReady, engaged in 19 days of culturally relevant STEAM curriculum, and participated in workshops on College & Career Preparation.

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## Surgical Smoke: The Forgotten Biohazard

**Julie Wooldridge**, Nursing, Undergraduate Student

### College of Professional Studies

Surgical smoke, a byproduct of surgical procedures, poses significant health risks to healthcare workers and patients. However, surgical staff often overlook it as a biohazard in operating rooms. This project highlights the harmful toxins of surgical smoke, including exposure to carcinogens and infectious agents, and the need for policy change to mandate local smoke evacuation. Effective policies and guidelines for smoke evacuation modeled from evidence-based research, combined with adequate education, awareness, and training, can minimize the risks of surgical smoke in the operating room and empower nurse leaders to ensure the safety of healthcare workers and patients.

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## Sustainability in Mental Health

**Meghan Stanton**, Social Work, Graduate Student;

**Angela Borge**, Social Work, Graduate Student

### College of Professional Studies

Currently in Mental Health treatment services there is an over reliance on medications and little resources are spent on providing education or support for changes in lifestyle or for teaching people coping strategies or harm reduction. Mental Health programs and the larger systems are understaffed and overburdened with responsibilities. The individuals working in this field are exposed to high levels of stress, limited access to funding and resources, and working in systems that are unhealthy. These individuals are at risk of experiencing their own health and mental health issues and supporting these individuals in self care is vital to the needs of the community. Our community project has been multifaceted as there are several issues impacting Sempervirens. We have been focusing on identifying ways to utilize the physical environment of Sempervirens in more therapeutic ways that would also be more welcoming and nurturing for the clients as well as more positive for the staff. We have simultaneously been developing workbooks of complementary exercises and activities aimed at improving mental health, wellness, and self-care. The workbooks contain a variety of approaches including one specifically adapted for Native Americans.

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## Temporal changes in body conditions of wintering waterfowl in Humboldt Bay

**Amir Malikyar**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Overwintering migratory birds may face increased competition for resources than in other seasons due to large influxes of birds arriving and inhabiting shared areas for similar amounts of time. These mechanisms may affect food availability, which in turn is implied to affect body energy reserves. We conducted a study to determine the temporal effects of body conditions of hunted waterfowl carcasses in Humboldt Bay, California, and test whether energy reserves as functions of body condition indices decrease over the winter season.

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## The Cultural Significance of Māori Pounamu.

**Brandon Borba**, Anthropology, Undergraduate Student

### College of Arts, Humanities & Social Sciences

An anthropological investigation of New Zealand's indigenous Maori people and their unique use of greenstone jade.

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## The Effect of Prescribed Fire in Northern California Dune Habitat for Avian Species

**Cameron Morgan**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

The objective of my study is to determine relative abundance and species diversity of avian species in dune habitat by comparing point counts conducted in burned sections of prescribed fires that were either treated or untreated with herbicides prior to application of fire compared to unburned areas of invasive beach grass or native dune mat. The prescribed fire event was conducted last fall in Loleta's Ocean Ranch Unit, and I am seeking to inform CDFW and Cal Fire on the potential effects of the burn on birds, with the goal of restoring our dunes to habitat with native vegetation.

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## The effects of combined oral contraceptives on mood and affect: A meta-analysis

**Povheng Yam**, Psychology, Undergraduate Student;

**Amanda Hahn**, Psychology, Faculty

### College of Professional Studies

Combined oral contraceptive (COC) pills are used more commonly than any other method of contraception, with over 22 million users worldwide. Although many studies have investigated the potential health-related side effects of hormonal contraceptive use, relatively less research has investigated the potential psychological side effects of COCs despite the fact that many women anecdotally report such side effects. The current meta-analysis analyzes mood outcomes in the literature and finds a small but significant mood improvement following initiation of COCs.

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## The Effects of Self-Determination Theory-Based Exercise Program for Individuals with Disabilities

**Guadalupe Cruz**, Kinesiology & Recreation

Administration, Graduate Student

### College of Professional Studies

This research aims to explore the efficacy of using Social Determination Theory (SDT) principles with an exercise program for individuals with disabilities. The SDT theoretical framework highlights the importance of social environments to support individuals' basic psychological needs such as autonomy, relatedness, and competence as it relates to exercise motivation. In the study, the researcher measured the exercise performance of an adult with Down Syndrome during a 6-week program hosted at a recreation facility in Northern California. The independent variables measured included walking, modified push-ups, and curl-ups.

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## The Effects of Water Temperature on Blueband Hermit Crab (*Pagurus samuelis*) Behavior

**Maddy Frost**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

This study investigates how water temperature influences Blueband hermit crab behavior from 4 different sites ranging from Southern to Northern California.

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## The History and Development of the Washoe People

**Caroline Blair**, Anthropology, Undergraduate Student

### College of Arts, Humanities & Social Sciences

This project is an exploration in the history, development, and reclamation efforts of the Washoe Tribe. This native tribe's ancestral land centers around Lake Tahoe in Nevada and California. The Washoe people have been adversely impacted by colonial and westward expansion. Currently, the Washoe have proposals for land use within each of their established settlements that will incorporate more agricultural practices and conservation efforts and the Tribe is opening a sawmill within the Tahoe Forest for revenue, jobs, and fire management. These projects represent efforts by the Tribe to reclaim their ancestral lands and promote their own development.

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## The Impact of Recreational Activity on Staging American Wigeon

**Daniel Moore**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

This study was conducted to determine if human recreational activity, such as birdwatching or dog walking, has any appreciable impact on the amount of time American wigeon spend feeding in preparation to their spring migration. Due to the large energetic cost associated with migration, disruptions to this pre-migratory feeding could delay or impede their departure, potentially lowering the bird's chances of mating.

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## The Kids Will Be Alright: Addressing Teens' Needs for Connection After Covid Isolation

**Megan McCullough**, Social Work, Graduate Student

### College of Professional Studies

At Sunset High in Del Norte, I created and implemented several curriculums held as master class "skillsshops." The topics ranged from self-care to media literacy to healthy relationships. I used a mindfulness and Polyvagal/somatic approach, while being multicultural, anti-racist, critically and resourcefully informed. The skillsshops were oriented through an alliance with the students, and relied primarily on established relationships and rapport with the students. Students left the skillsshops with a deeper sense of understanding the gifts within themselves, along with a more critical, embodied, and curious way of interacting with the world around them.

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## The Patagonian mara (*Dolichotis patagonum*) and Crested screamer (*Chauna torquata*): An evaluation of enclosure usage within a mixed-species exhibit

**Kaylie Adams**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Providing balanced and enriching enclosures is a key part of maintaining the animal welfare standards of zoos and sanctuaries. This study was designed to assess the enclosure usage patterns related to foraging opportunity of both the Patagonian mara (*Dolichotis patagonum*) and Crested screamer (*Chauna torquata*), housed within the same exhibit, at the Sequoia Park Zoo in Eureka, California. These results have the potential to be extrapolated towards the betterment of exhibit designs and husbandry practices for mixed-species exhibits in zoos.

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## The power of vulnerability

**Felix Nichols-Tabrum**, Environmental Studies, Undergraduate Student

### College of Arts, Humanities & Social Sciences

This is a poster I made based on the "Power of Vulnerability" TED talk by Brené Brown. I really enjoyed watching this TED talk, I thought it was very informative. I enjoyed the topics talked about within this TED talk and I thought I would base my poster on it.

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## The Smith River Plain Water Quality Management Plan: A Collaborative Effort Between the Regional Water Board and Cal Poly Humboldt

**Logan Wolfe**, Chemistry, Undergraduate Student

### College of Natural Resources & Sciences

The Smith River, known as one of the most pristine watersheds in the continental United States, dissects agricultural land used for Easter lily cultivation in the Smith River Plain of Del Norte County, California. It is estimated that this region grows 95% of all Easter lilies grown in the world. High amounts of pesticides are applied during cultivation to combat nematodes and fungi. The Regional Water Board created

the Smith River Plain Water Quality (SRPWQ) Management Plan in response to pesticide and fertilizer concentrations that have exceeded USEPA benchmarks. Included in this plan are Best Management Practices (BMPs) that aim to improve water quality in the region.

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## The Table Tabletop: A beautiful, awful game with my friends

**Thomas Franaszek**, Forestry, Fire & Rangeland Management, Undergraduate Student

### College of Natural Resources & Sciences

The presentation is a showcase of a tabletop roleplaying game I made and played with my friends. The game was initially a way to connect in the the hard times of the Covid lockdown, but became much more than that. It demonstrates how the art and storytelling of myself and my friends has evolved over three years.

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## Therapeutic Group For Anxiety & Reconnection after COVID-19

**Artemisia Feral**, Social Work, Graduate Student

### College of Arts, Humanities & Social Sciences

This fall Open Door Community Health Centers (ODCHC) experienced a extremely high number of patients whose anxiety and agoraphobia made it difficult for them to engage in valued life activities. I was asked to assist with developing and implementing a therapeutic group to support these individuals because clinicians at this organization were experiencing such large caseloads that it was difficult for them to effectively serve all the clients who needed support. The goal of this project was to create a group therapy setting where clients could be treated in a sustainable and time effective way.

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## There's not a lot of cool chicks out there: A regional study of climate change on passerine morphology over time

**Tabitha Page**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Wildlife have been responding to climate change in many ways, and I decided to focus on if warming temperatures are influencing avian morphology by using museum specimens from the Cal Poly Humboldt Wildlife Museum. This study focused on passerine birds collected from the 1880's up until 2022.

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## Tibial Acceleration and EMG Differences Between Isocaloric High-Incline Walking and Level-Grade Jogging

**Taj Krieger**, Kinesiology & Recreation Administration, Graduate Student

### College of Professional Studies

This study will aim to determine the effects of high-incline exercises on impact forces (tibial acceleration) and various muscle activation metrics, including peak force, the area under the curve, and fatigue parameters between isocaloric exercises: walking at a high incline and jogging on level grade.

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## Time Activity Budgets of Ruddy Ducks at the Arcata Marsh and Wildlife Sanctuary

**Amanda Bautista**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Ruddy ducks (*Oxyura jamaicensis*) are among the many waterfowl that migrate south from their wintering locations in search for warmer climates. With Humboldt Bay located on the Pacific Flyway, Arcata Marsh is a primary stop-over site for the ducks' journey. Time activity budgets will help to infer if females require additional nutrients for their fat storage before migration and the start of egg production. A prediction was made that females will spend more time foraging underwater in preparation for breeding and laying periods. Finding that there was no significant difference between foraging behavior of female and male ruddy ducks.

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## Transition Aged Youth Transition Resources

**Robert Grady**, Social Work, Graduate Student;  
**Dakota Paulsen-Andres**, Social Work, Graduate Student

### College of Professional Studies

This was a community project developed with The Transitional Age Youth Program of Humboldt county, which serves youth 16-26 who are houseless and/or have been in the foster care system. This program has an emphasis on working with youth who identify as LGBTQIA2S+. Our community project sought to bridge the gap that queer youth can experience when accessing gender affirming healthcare in rural areas.

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## Trust of Facial Recognition in the Black Community

**Michaela Old**, Sociology, Undergraduate Student

### College of Arts, Humanities & Social Sciences

Surveillance of has long contributed to the stripping of identity and experience of Blackness through derealization and depersonalization, and has continued into the digital era. Examining forms of surveillance, such as facial recognition, and the effect it has on the Black community is vital to combat its harmful effects.

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## Twelve-Hour Nursing Shifts and the Impact on Patient Safety

**Jaimi Wisner**, Nursing, Undergraduate Student

### College of Professional Studies

Twelve-hour shifts for nurses have become increasingly popular due to the perceived benefits, including a way to fight nursing shortages. However, recent evidence suggests that twelve-hour shifts may negatively affect patient safety. Therefore, this project argues for creating a new policy for nurses to work eight-hour rather than twelve-hour shifts. The project examines the evidence regarding the impact of twelve-hour shifts on patient safety, nurse fatigue, and avoidable errors and discusses the benefits of eight-hour shifts. This project advocates for a change towards shorter work hours for nurses to improve their productivity and increase patient safety.

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## Understanding Traditional Ecological Knowledge on Elk Through a Yurok Cultural Lens

**Juli Suzukawa**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

Traditional Ecological Knowledge (TEK) research has been implemented throughout various aspects of wildlife management and conservation. However, there is no single definition of TEK that applies to all Indigenous peoples. Wildlife management practiced by Indigenous peoples implements the use of TEK and Indigenous Research Methodologies (IRM) as a way to holistically serve the needs of the environment, animals, and the people. While my thesis focuses on tribal wildlife management of buffalo, eagles, and elk, this poster focuses on Yurok TEK and how personal experiences of Yurok members have shaped their knowledge surrounding Roosevelt elk.

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## Unraveling the Taxonomic Classification of the Tolowa wallflower (Brassicaceae: Erysimum), a dune endemic of the California North Coast

**Cameron Jones**, Biological Sciences, Graduate Student

### College of Natural Resources & Sciences

Found in Del Norte County, California, in the Tolowa Dunes State Park, there is an *Erysimum* population that does not fit the species boundaries of *E. concinnum* Eastw., its current assigned name. A closely related species, *E. menziesi* (Hook.) Wettst arguably better fits the morphology of the Tolowa Wallflower, with the caveat that it does not adequately depict the population. Because of the endemicity of the two aforementioned species and the Tolowa wallflower, correct taxonomic assessment and a clear definition of species boundaries are warranted. To evaluate the species boundaries and circumscription of the Tolowa wallflower, we would collect DNA samples from *Erysimum* found on the coast.

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## Urbanization Impact on Native Avian Species Richness

**Makana Kiakona**, Wildlife, Undergraduate Student

### College of Natural Resources & Sciences

The aim of this study was to focus on the richness of native avian species to determine if they are influenced by urbanization. To measure this, point counts were conducted, in which all birds were counted and identified. A total of 30 survey sites were evenly divided between Arcata, Arcata Bottoms, and Eureka, to encompass a gradient of urbanization.

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## Using eDNA to Detect Endangered Tidewater Goby, *Eucyclogobius newberryi*, in Northern California's Lost Coast

**Madison Richardson**, Fisheries Biology, Undergraduate Student

### College of Natural Resources & Sciences

This research project focuses on detecting the presence or absence of endangered tidewater goby, *Eucyclogobius newberryi*, in the Lost Coast in Northern California using environmental DNA. If presence is detected, the Lost Coast can be sampled annually in order to gather enough data on the population to study their dynamics for any existence of extinction-colonization dynamics and provide another opportunity to understand metapopulation dynamics in tidewater gobies, thereby aiding in the conservation efforts of this species.

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## Using Nature to Nurture: A Forest Based Emotional Support Intervention

**Jay Schoenfield**, Social Work, Graduate Student

### College of Arts, Humanities & Social Sciences

Through discussions had between Grant Elementary school staff and myself, it was established that Grant Elementary's nature trail, which is located on school grounds was being underutilized in regards to the emotional regulation techniques that were being implemented. In response to this I created a guide sheet grounded in mindfulness through reviewing literature pertaining to forest bathing and the effects of nature exposure. Through discussions had with campus staff I formulated activities that would best support differing behavior and personality types. I then began implementing the guide sheet with small groups of students on the nature trail and on April 6th I lead a staff training.

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## Veteran and Dependent Education Benefits

**Lonnie VanMeter**, Social Work, Graduate Student

### College of Professional Studies

This is a project that was a training to VA social workers to educate them on education benefits for Veterans and their families.

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### Virginia Rail (*Rallus limicola*) Distribution, Abundance, and Habitat Characteristics

**Sara McCall**, Wildlife, Undergraduate Student

#### College of Natural Resources & Sciences

This study examines the Virginia rail around Humboldt County. Distribution, abundance, and habitat characteristics are determined.

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### White-crowned sparrow songs not shown to respond to anthropogenic noise pollution in coastal Humboldt County

**Keagan Trischman**, Wildlife, Undergraduate Student

#### College of Natural Resources & Sciences

White-crowned sparrows (*Zonotrichia leucophrys*) adjust their songs based on environmental factors. White-crowned sparrows have been observed altering their songs in response to loud anthropogenic background noise. This project sought to establish a link between ambient noise level and song variables such as minimum song frequency and frequency bandwidth.

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### Wildlife-vehicle Collisions on Highway 299 East

**Marco Blancas**, Wildlife, Undergraduate Student

#### College of Natural Resources & Sciences

Senior project about wildlife-vehicle collisions on Highway 299 East. I hypothesized that more lanes and lower elevations have more roadkill.

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### You are not losing your mind. You are losing your estrogen.

**Caroline Murphy**, Nursing, Undergraduate Student

#### College of Professional Studies

Menopause is a physical, psychosocial, and cultural transition as diverse and complicated as humans themselves. Every person with ovaries who lives long enough will experience the fluctuation and decline of sex hormones, and about 80% will have symptoms likely to start earlier and be wider-ranging than expected. In this proposed project at a rural health clinic, annual screening will be offered to patients aged 35-55 years. Patient replies will result in offering resources, registered nurse consults and classes, and focused provider visits. Directly addressing perimenopause allows for anticipatory guidance and shared decision-making to improve quality of life in middle-age and beyond.

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### Youth Developmental Program: Captain John High School in Hoopa, CA

**Rosa Granados**, Social Work, Graduate Student

#### College of Professional Studies

We are supporting the Youth Developmental Program research and outcomes at Captain John Continue High School in Hoopa. Two Feathers provides and funded these Native American Family Services located all

over Humboldt County schools and systems utilizing tribal best practices as their main guidance to a balanced community. This program runs work pods, weaving circles, drumming circles, and LGBTQ+2Spirits talking circles. They advocate and collaborate with all Two Feathers clinicians, school administrators, school counselors, programs, and resources that provide share career & college opportunities, cultural interventions, and lastly expand the connection to nature and community. For the youth!

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### Youth In Motion: Sunset Kayaking

**Alaya Eveland**, Recreation Administration, Undergraduate Student

#### College of Professional Studies

My project is an event that celebrates how outdoor recreation can connect youth to the land, to our communities, and ourselves. This will be a free private kayaking event at the Humboldt Bay Aquatic Center on May 6th, and aims to support transition age foster youth through a free community building experience. All transportation, gear, and food will be provided at no cost to the participants, and will be funded by various grants and donations from our stakeholders. The event will be hosted by Center Activities at Cal Poly Humboldt and California Youth Connections, and will be open to members of Elite Scholars and the Humboldt County Transition Age Youth Committee (HCTAYC).

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### Youth Voices Matter

**Lori Hayes**, Social Work, Graduate Student

#### College of Professional Studies

In partnership with the Yurok Tribe, this project seeks the opinions of Yurok extended foster care and aged-out foster youth about their experiences, their needs, and their opinions on how services can be improved and ideas for future programing for Tribal foster youth. This project will produce a report that highlights common themes found in the interviews, insightful input and ideas for improvement provided by the participants. As the ICWA Department and the Tribal Court continue to design programing for youth and refine existing programs, the hope is that this final report will provide useful information that will help them in program design and improvements over time.

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### Yurok Wellness Court Professional Training

**Madalene Easterbrook**, Social Work, Graduate Student;

**Angelique Hennessy**, Social Work, Graduate Student

#### College of Professional Studies

Our finished project is a recorded video training, approximately one hour long. We gave a copy of the training to the Yurok Wellness Court. We also gave a copy of the slides to the Yurok Wellness Court, so that they may conduct their own live training using our materials.

## Humboldt Sculpture Walk

All Floors ▪ Guided Tours at 12:00 pm & 5:00 pm (meet in Lobby, 1st Floor)

The sculpture walk will take you on a journey through the Library, as pieces are displayed in different locations appropriate for each piece. Once again, you will find that there is an abundance of high quality art created on this campus. This is part of the annual Humboldt Sculpture Walk, presented by the Associated Student Sculptors, which is an event designed to showcase the wide variety of artwork produced by the Humboldt Sculptor program and usually occurs April to May of every year, closing with commencement.

Coordinated by Sondra Schwetman, Humboldt Sculpture Lab

## Becoming a Polytechnic: The Nexus of 21st Century Scholarship

3rd Floor, Room 317 ▪ 2:00–3:00 pm

The Humboldt Journal of Social Relations (HJSR) celebrates 50 years of publication with the release of the 2023 issue “Becoming a Polytechnic.” Issue editors seeded multidisciplinary conversations that wrestle with pressing local and regional problems as the university embraces its new identity as the third polytechnic in the California State University system. With contributions from 76 Humboldt faculty, staff, students, alumni, and community members, the work sets the stage for creative, forward-thinking scholarly collaborations and educational visions that have been signatures of Cal Poly Humboldt. The articles include a range of topics including the arts, traditional ecological knowledge, literacy, wildfire management, energy, sea level rise, nursing and teacher education, and the history and future of cannabis. The issue is dedicated to Samuel P. Oliner, who in 1973 founded the journal. Oliner was a professor of sociology at Humboldt who published and spoke internationally on research on altruism inspired by his experiences as a Holocaust survivor. Through support from the Humboldt Sponsored Programs Foundation, limited complimentary hard copies of the 2023 HJSR issue will be available for free at the journal reception.

## Musical Performances

Library 1st Floor ▪ 2:00–4:00 pm

The music department will showcase Humboldt students as soloists, composers, and performers in chamber ensembles.

Coordinated by Cindy Moyer and Virginia Ryder, Department of Music

Gravity	Marc Mellits (b. 1966)
Ally Houghton, marimba ▪ MJ Fabian, marimba ▪ Nicholas Redfern, marimba Jamison Maciel, vibraphone ▪ Diego Roriguez-Willie, vibraphone	
Ma Belle Evangeline	Randy Newman (b.1943) arr. Danyelle Allen Michael Giacchino (b.1967)
Married Life	arr. Raili Makela Michael Giacchino (b.1967)
Le Festin	arr. Rebekka Lopez Michael Giacchino (b.1967)
The Ghost Ryder Saxophone Quartet: Rebekka Lopez, soprano saxophone ▪ Raili Makela, alto saxophone Luke Faulder, tenor saxophone ▪ Danyelle Allen, baritone saxophone	

## Musical Performances *continued*

“Lily’s Eyes” from <i>The Secret Garden</i>	Lucy Simon (1940-2022) and Marsha Norman (b. 1947)
Pablo Murcia, tenor ▪ Andrew Will, tenor ▪ John Chernoff, piano	
Sevillanas I-IV	Traditional Arr. Juan Serrano
Abelos Gaumot, guitar ▪ Olivia Horne, guitar ▪ Kaveh Khajavi, guitar ▪ Russell Moline, guitar	
Ma mère l’Oye I. Pavane de la Belle au bois dormant II. Le Jardin Féérique	Maurice Ravel (1875-1937)
Gaoyi Xiao, piano ▪ Alex Orla-Bukowski, piano	
Eine Kleine Nachtmusik, K. 525 Allegro Rondo: Allegro	Wolfgang Amadeus Mozart (1756-1791)
The First Cal Poly Humboldt String Quartet: Jasmine Kwan, violin Claire Salmonson, violin ▪ Andrew Olson, viola ▪ Mie Matsumoto, cello	
Beastly	Jack Stratton (b. 1989)
Luke Faulder, alto saxophone ▪ Chris AntolinWilczek, guitar ▪ Kris Donald, bass ▪ Jordan Bolla, drums	
Ausencias	Astor Piazzolla (1921-1992)
Claire Salmonson, violin ▪ John Chernoff, piano	
Birds for Piccolo, Flute, and Alto Flute Birdsong	Herman Beoftink (b. 1953)
Rebekka Lopez, piccolo ▪ Rebecca Cuevas, flute ▪ Danyelle Allen, alto flute	
Sonatina in G Major, Op. 100, for violin and piano Allegro risoluto	Antonin Dvorak (1841-1904)
Mary Meza, violin ▪ John Chernoff, piano	
Suite for flute and jazz piano Baroque and Blue	Claude Bolling (1930-2020)
Ricardo Paredes, flute ▪ John Chernoff, piano	
Song Book Evening Song	David Maslanka (1943-2017)
Luke Faulder, alto saxophone ▪ Jamison Maciel, marimba	

## Musical Performances *continued*

String Quartet No. 3, “Mishima” (1985) 1957-Award-Montage Grandmother and Kimitake Closing	Phillip Glass (b. 1937)
Christopher Antolin-Wilczek, guitar ▪ Kyle Bailey, guitar ▪ Nicholas De Anda, guitar Andrew Erbach, guitar ▪ Francisco Gonzalez, guitar ▪ Jennifer Trowbridge, guitar	
Sonata in D minor, K. 9, L 413	Domenico Scarlatti (1685-1757)
Andrew Olson, piano	
Muppet Medley Muppet Show Theme Man or Muppet Mahna-Mahna	arranged by Dakota Harford Paul Williams (b.1940) & Kenny Asher (b.1941) Bret McKenzie (b.1976) Piero Umiliani (1926-2001)
Ginny Ryder, clarinet ▪ Riyanna De La Rosa, tenor saxophone Jacob Singer, horn ▪ Dakota Harford, bass clarinet	

## CIRM Bridges 3.0 Connect Lightning Talks California Institute for Regenerative Medicine

2nd Floor, Room 209 (Fishbowl) ▪ 3:00–5:00 pm

Cal Poly Humboldt CIRM Bridges scholars are pleased to present their research in regenerative medicine to our campus and community in 5 minute lightning talks with discussion to follow.

The Humboldt CIRM Bridges Programs supports student internships in research laboratories developing cell-based therapies to address unmet medical needs. This year’s CIRM Bridges student interns in regenerative medicine research are approaching the end of their 12-month internship in stem cell biology and regenerative medicine at one of our outstanding collaborating host institutions: The Stanford University Institute for Stem Cell Biology and Regenerative Medicine and The University of California Davis Stem Cell Program. They have received advanced training in the research methods and good manufacturing practices required to develop cellular-based therapies for emerging and unmet medical needs. Posters of the work will also be available for viewing. Current scholar projects can be found at [cirm.humboldt.edu/current-scholars](http://cirm.humboldt.edu/current-scholars)

## Celebration of First-Year Writing

2nd Floor, Makerspace ▪ 3:00–5:00 pm

First-year Composition and Rhetoric students at Cal Poly Humboldt will showcase digital multimodal projects including video, podcast, poetry, collage, and more. Come celebrate first-year student writing.

Coordinated by Erin Sullivan, English Department

## Emerging Media for the Gallery

3rd Floor ▪ 4:00–5:00 pm

### QTBIPOC Film Coalition

Members of the student run digital humanities creative research team 'QTBIPOC Film Coalition' will be presenting works that explore the art of filmmaking, new media, and immersive/VR technologies from a social justice perspective. Working with Dr. Michelle Cartier to develop an interactive presentation of immersive virtual reality works that are examining authentic experiences of Representation in Film and actively seeking to 'Rearticulate the Gaze' through the narrative frameworks of popular cinema, lead research assistants, Daniel Garcia (CRGS Major) and Matthew Mason (film major) will also be sharing out on their recent experience of getting to visit Austin, Texas for the SXSW Conference as a part of being awarded the Research, Scholarship, and Creative Activities Program grant (RSCA) for digital humanities creative research development at Cal Poly Humboldt.

### 16mm Filmmaking and New Media

Get ready for some visceral and irrefutably powerful works, and possibly at times just 'weird' analog and digital art, to be experienced through the human senses! Cal Poly Humboldt's Film Program is still celebrating the love of celluloid and making 16mm films while also venturing into 'New Media' this Spring. Students from the Film 478 course will be exhibiting a range of works that will explore and express their voices through new communications technologies, experimental filmmaking processes and multiple screen projections. As a practice for visual storytelling and sensory experience, these collaborative works of 'emerging art' and 'new media' un-work to renegotiate the borders of the screen that challenge human perception and demonstrate new narrative frame-works through 360-degree camera work and VR environments, the loveable kinesthetic grain of 16mm film, augmented reality and sonic labyrinths, screen sculpture and other works of analog and digital media translated through non-conventional presentation methods.

Coordinated by Dr. Michelle L. Cartier, Film Program

## Film Screenings

1st Floor, Room 120 ▪ 4:15 – 5:00 pm

The Film Program will feature a variety of outstanding, entertaining, and thoughtful recent short films. These collaborative works of art demonstrate the accomplishments of Cal Poly Humboldt's emerging filmmakers and their progression through our foundational Filmmaking I-IV production classes as well as various Film electives. Students hone creative and technical skills by producing original films and videos spanning the genres of narrative, documentary, social change and experimental. The films explore personal visions, social topics, internal worlds, and much more. They are the creative output of a diverse, talented, and extremely hard working group of up-and-coming filmmakers.

Coordinated by Dave Jannetta, Film Professor and Program Lead, Art + Film Department

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The logo features a large yellow gear-like shape with smaller dots around it. The text '10th Annual' is in a yellow oval above the word 'ideaFest' in white and green. Below it is the subtitle 'A Showcase of Research and Creative Projects' in white.

10th Annual  
**ideaFest**  
A Showcase of Research and Creative Projects

This year's ideaFest is sponsored by the Office of Research & Sponsored Programs, Marketing & Communications, and the Library in collaboration with the Colleges. We are all excited for the opportunity to support the development and dissemination of research & creative activities at Cal Poly Humboldt.

