

Alexandra J. Brown

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EDUCATION

California State University, Bakersfield

Graduated May 2022

B.S. Biology

Overall GPA: 2.96

CSUB GPA: 3.64

**GPA statement available upon request*

EXPERIENCE

Substitute Teacher

September 2022- Present

Kern High School District

- Involving students in self-directed learning of complex topics.
- Rise to the level of each instructor I am tasked with replacing to ensure a comfortable and efficient learning environment.
- Offering tutelage and assistance to students in a variety of math and science subjects.
- Engaging in regular, effective communication with educators, administrators, parents, and students.

Lab Technician

July 2021- June 2022

*CSU Bakersfield, **Rae McNeish**- Aquatic Ecology Lab*

- Assisting with research projects studying anthropogenic contaminants in urban rivers and grassland and forest habitats.
- Contribute to the lab by vacuum-filtering samples, preparing filters for microplastic identification, identifying microplastics using light microscopy, and participating in any other lab, field, or computational activities that become available.
- Engaging in biweekly lab meetings to discuss recent publications in the field and opportunities of interest, receive and give feedback on papers, CV's, proposals, etc., and discuss current progress and future directions within the lab.

NSF-funded Undergraduate Researcher

Summer 2021

*Scripps Institution of Oceanography, **Anela Choy**- Integrative Oceanography Lab*

- Developed and executed a project investigating the biomass of pyrosomes and calyphorans in the SCCE. Culminated in a poster symposium.
 - I also sorted samples of bulk zooplankton preserved in formalin, carefully handled and broadly identified fragile organisms, properly used all involved chemicals, maintained a detailed lab notebook recording all data, and shared findings in a poster presentation.
 - Attended workshops on topics including software carpentry, applying for funding, presenting research in a poster, and fostering diversity and rejecting discrimination/harassment in the workplace.
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RESEARCH AND CAREER GOALS

- I am interested in understanding the effects of anthropogenic pollution and climate change on marine ecosystem trophic ecology. I am particularly curious about microplastic sequestration and transport by filter-feeding organisms and daily vertically migrating organisms, the roles of gelatinous organisms in marine food webs, and the effects of recent, large pyrosome blooms on the California Current Ecosystem.
 - I am applying to MS programs to advance my research and teaching experience in anticipation of pursuing a PhD and a career research professorship. I wish to teach and mentor the next generation of scientists and increase diversity in oceanography.
 - I am a black and indigenous Hispanic woman with a disability, so I am especially passionate about increasing the representation and inclusion of historically underrepresented groups in ocean sciences.
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RESEARCH PRESENTATIONS

- **Brown, A.J.**, Hetherington, E.D., and Choy, C.A. Biomass of pyrosomes and calyphorans in the Southern California Current Ecosystem. Presented NSF REU Internship poster at the **2022 Ocean Sciences Meeting** in Honolulu, HI as a part of my membership in the Hampton ASLO Multicultural Program.
 - **Brown, A.J.**, Hetherington, E.D., and Choy, C.A. (2021) Biomass of pyrosomes and calyphorans in the Southern California Current Ecosystem. NSF REU Internship symposium at the Scripps Institution of Oceanography at UC San Diego in La Jolla, CA. Presented research poster at NSF REU Internship symposium at the **Scripps Institution of Oceanography** at UC San Diego in La Jolla, CA.
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SERVICE AND OUTREACH**Host and Organizer: March For Our Lives Kern County****June 2022**

I organized and hosted a rally and march promoting safety in schools in the wake of the Uvalde tragedy, thanks to assistance from leaders from our local government and CSU Bakersfield. It featured a variety of community and student speakers and attendees.

ASI Vice Chair of the Sustainability Committee**Spring 2022**

I was a member of the first student-led Sustainability Committee at California State University, Bakersfield. We worked to advance sustainability efforts campus wide.

ASI Director of Students with Disabilities**2021-2022**

I represented and advocated for students with disabilities at CSU Bakersfield and engaged in regular volunteer events to give back to the university and community.

Volunteer at the CSU Bakersfield Edible Garden**2021-2022**

I volunteered at least once per week to help plant seeds and starts, remove weeds, harvest produce, till the soil, and more.

Volunteer at Wind Wolves Preserve: The Wildlands Conservancy**2020**

I planted native flora species.

Science Fair Judge at Suburu Elementary**2019**

I evaluated students' knowledge about and application of the scientific method.

Volunteer at Kern County Library- Rathbun**2018-19**

I worked with librarians to engage kids in reading and fight the epidemic of illiteracy in Kern County.

Science Night Presenter at Berkshire Elementary**2018**

I educated students on biological topics to encourage an interest in science.

SKILLS

- **Biology**: Performing stereo and compound microscopy, dissection, slide preparation, gram staining, agar plating, quadrant streaking, handling of delicate gelatinous marine organisms, working with organisms preserved in formalin and ethanol.
- **Chemistry**: Electroplating, separating the components of mixtures, identifying chemical makeup of salts and liquids, chemical safety, and manipulating equilibriums.

- Aquatic Ecology: Basic aquatic macroinvertebrate identification, identifying interconnectedness among the biological, geological, and chemical properties of aquatic systems, and collection and analysis of data from aquatic systems.
- General Laboratory: Vacuum filtration, weighing, titrating, pipetting, converting units, proper handling of biological and chemical substances, basic microplastic identification.
- General Instruments: Using a pH meter, thermometer, volumetric glassware, light microscope, spectrophotometer, standard centrifuges, balance, and fume hoods.
- General Research: Conducting research design, data collection, statistical analysis using Microsoft Excel, scientific writing, data interpretation, and communicating results using tables and figures, presenting research in a scientific poster.
- Additional relevant skills: Public speaking, group work, independent work, time management, peer tutoring, attention to detail, operating vehicles including large trucks, navigating outdoor terrain, caring for domestic animals, caring for indoor and outdoor plants, hiking, canoeing, and kayaking.

MEMBERSHIPS

CSUB Coalition of Chicken Enthusiasts	Spring 2022
ASLO Multicultural Program	2022
<i>*Presented research poster from summer 2021 REU at 2022 OSM.</i>	
CSUB Native and Indigenous Coalition	2021- 2022
CSUB ASI University Affairs Committee	2021-2022
<i>Director of Students with Disabilities on the committee.</i>	
CSUB Biology Club	2020-2022
disABLED person	2020-2022

CERTIFICATIONS

Substitute Teaching Permit

Valid through **October 2023**

Issued by: California Commission on Teacher Credentialing

Supplemental Certifications:

- Mandated Child Abuse Reporting for Educators
- Sexual Harassment Prevention Training

AWARDS

CSUB NSME Dean's List- Biology

- Awarded: Spring 2021(4.0), Fall 2021, Spring 2022 (4.0)

I was honored for achieving a GPA of 3.25 or higher while enrolled full-time for the semester.

ASI University Affairs Committee- Director of the Year

- Awarded: May 2022 (for 2021-2022 academic year)

I was honored as the Director of the Year in my capacity as the Director of Students with Disabilities for demonstrating outstanding commitment to improving the campus experience for my peers.

LANGUAGES

- English: native language.
- Spanish: basic competency in reading, writing, and speaking.