



Stanford University

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Deep Springs College  
250 Deep Springs Ranch Road  
Highway 168. Big Pine, CA 93513

Dear Selection Committee,

I am writing to submit my application for the Herbert Reich Chair of Natural Science at Deep Springs College. I would bring to the position two decades of educational experience, both in the classroom and in the field, as well as degrees in Biology (Ph.D.), Oceanography (M.S.), Education (M.A.T.), and Mathematics (B.A.). Beyond that, I bring a wealth of experience with diverse stakeholders, colleagues, and students in both marine and terrestrial environments, and I'd be thrilled to continue building on those connections at Deep Springs.

Although a marine ecologist may not seem an obvious fit for a faculty spot rooted in a mountain-ringed ranching community, my preparation for this role has been lifelong and I hope you will find that my diverse skill sets will enable me to transfer the scientific methods and practices that I have honed in the marine realm into curriculum and instruction that is relevant and engaging for the students at Deep Springs. I believe that my passion for the pillars that drive the Deep Springs community (Labor, Self-Governance and Academics) and the inspiration I take from the opportunity to lead the entire two year science education of some of the brightest young scholars coming out of these turbulent times would make this a dream collaboration among the Deep Springs faculty, students and myself.

We are in the midst of a time in which the very principles that drive the Deep Springs mission are under fire across vast-swaths of the American Populace, certainly among those with influence. Although lip-service is often paid to self-governance, democratic engagement has become harder and tools to use politics only as a means to retain power and influence have become more normal. Working with students who understand not only the importance, but also the responsibility and the fragility of self-governance would be a refreshing change for me from the head-in-the-sand politics of many of the institutions I have worked with as a method of self-defense.

The cultural value of science and education have gone through periods of boom and bust, but the overall value of academics has never felt so fragile in my lifetime. The idea that the scientific method and scientific inquiry are institutions to uphold and emulate and form a bedrock upon which to base societal decisions has always felt self-evident to me, but it has become increasingly clear that that is not the consensus view of the current zeitgeist. What then should be done? A better educated populace? An investigation into the scientific process itself that may lead to greater public trust? Some other structure for answering questions related to the natural world? These are questions that I would wish to explore with students at Deep Springs, and to do so from a common reference point constructed around classes taught in the unique environment of a close community, working with animals, connected with nature, with a rigorous quantitative foundation of thought.

Before turning to science, I taught mathematics for six years in public high schools that dominantly served historically marginalized populations. By nature I examine biological problems through quantitative lenses and I actively seek out opportunities to engage the next generation of researchers who will need to integrate quantitative and critical thinking skills with real world, lab and field

experience. As a teacher, I taught heterogenous, untracked classes using a collaborative, group-focused and inquiry-based pedagogy, and I hope to bring that same mindset to this faculty position.

Additionally, my academic career is marked not just with the utilization of a diverse suite of state-of-the-art field techniques, but also with consistent efforts to disseminate and teach these skills. For example, in December of 2020 I organized a workshop for more than fifty scientists with a broad spectrum of training who were seeking to learn how to turn the raw voltage provided by bio-logging tags into useful metrics of animal orientation, motion and location. The success of this workshop was later highlighted by the International Bio-logging society during the presentation of an Early Career Award for “continually pushing the field by developing new bio-logging technologies and computational workflows that have changed the way we study predator/prey dynamics in the open ocean.”

It is hopefully clear from my accomplishments and credentials that a certain type of hard work has always been foundational to my self-identification. I intuit, however, that the Labor that supports the Deep Springs mission includes not only dedication to one’s craft, but specifically the manual labor that can form bonds, clear minds, and exercise the spirit. I have always found solace and centering in working hard outdoors. I spent several years as a wilderness guide specifically because it gave me the opportunity to teach and work with young people in an environment where we are all pushing each other and supporting each other of necessity. My first year after college I worked as a guide for a therapeutic wilderness company in Utah. One of the tasks that students would have to perform was making a fire using a bow-drill set (no matches or lighters), and it was a task the entire group depended on in order for anyone in the group to have a hot meal that night. One of my colleagues used to remark, and I found it to be true, that he could tell more about a student from 3 minutes working with them to make a fire than he could from 3 months in a classroom – there’s just something innately human about a physical challenge with a defined, shared goal, and losing that once-common aspect to our culture may be one of the largest challenges we face as a society in the future.

I would greatly look forward to working with the students and faculty at Deep Springs to forge connections between science and society, and to construct a curriculum that helps the students of Deep Springs be the next generation of leaders that we so sorely need right now.

With gratitude,

*David E. Cade*

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