

## Chris Talbot – Personal History Statement, UC-SC Ecology & Evolutionary Biology PhD

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### Background:

My first lesson in rapid environmental change came at age four. After our eviction, my family began migrating from couch to couch. I adapted to housing and food insecurity, continuous theft by my father as he pawned our belongings to pay for his next high, and transfers from one school district to another as we evaded him.

Luckily, amidst the chaos, I found refuges that nurtured my growth and offered stability, allowing me to persist through tough times. The local zoo emphasized the beauty and value of the natural world, instilling in me a commitment to environmental stewardship and a fascination with nature. The band room offered a community and a team, developing my interpersonal skills and offering a support network. An old hand-me-down laptop introduced me to programming, laying the foundation for my computational skills and igniting my love for problem-solving. As I overcame my adverse childhood, I became a master of adaptation to change. It's fitting, then, that I would find my calling studying *biological adaptation to rapid change*.

### Trajectory Leading to Graduate School:

When my father took his life while I was in high school, I found no refuge strong enough to keep me grounded. Grueling, unfulfilling jobs became my reality after dropping out. Seeking a more fulfilling career, I returned to school, learning to navigate academia alone—a low-income, first-generation student without familial support.

I completed an Associate's degree at Grand Rapids Community College focused on computer science, but I wanted to align my career goals with my care for nature. After transferring to the University of Michigan, I declared a major in Ecology, Evolution, and Biodiversity, seeking to leverage my quantitative skills to solve environmental issues. Through research experience, I found ways to do so and discovered a passion for scientific inquiry. With the support of my mentors, I explored various facets of biological and computational research, developing broad, interdisciplinary skills and interests. I've since narrowed my research interests to population genetics, a field I believe best marries my computational and environmental skills and interests. In particular, I'm interested in the population genetics of adaptation to rapid environmental change. Given my experience with sudden change, I know the difficulty of adaptation and the importance of identifying ways to gain stability and move forward. As such, I'm fascinated by how populations, species, and ecosystems adapt to rapid change and how we might predict the natural world's resilience in the face of intensifying global change.

Reflecting on my journey, I recognize that my adverse experiences have strengthened my resilience and determination, taught me the importance of aligning my work with my passions, and ultimately led me to a path where I can contribute meaningfully to science and society. I'm

excited to pursue a career that satisfies my intellectual curiosity while keeping a broader purpose in mind.

### **Community & Diversity:**

Diversity in academia prevents research bias, drives innovation, and enriches communities. While there is a long history of wealthy, white men dominating academic circles, diversity initiatives have shown slow but steady success in improving this problem. Yet, income diversity in higher education has stagnated or, in some cases, even worsened. As a PhD student, I plan to address this by including undergraduates in my research process. By seeking funding to pay research assistants, I will provide access to academia to students who may otherwise be unable to afford to volunteer for research experience. Providing low-income students a path to academia will pave the way for greater community engagement and trust in science.

As an undergraduate, I sought to facilitate diverse communities of belonging through volunteer opportunities and at work. In community college, I tutored my peers, primarily adult learners, in mathematics and language arts. While witnessing the struggle and uncertainty older students face pursuing an education in a youth-dominated space, I discovered a passion for promoting non-traditional paths toward education. At the University of Michigan, I put my goal of supporting non-traditional students into action: using my first-hand experience as a first-generation transfer student, I worked as a transfer student peer mentor, assisting prospective transfer students with the application process and supporting their transition to Michigan. I've also worked with educational programming for the local Science Olympiad and Botanic Gardens, helping students from various backgrounds engage with science and nature. Drawing on my experiences as both mentor and mentee, I remain dedicated to building educational communities that celebrate diverse backgrounds and non-traditional paths—spaces where students like my former self can find the support they need to thrive.

Engagement with local communities outside of an academic or educational setting is crucial to staying grounded as a researcher. To this end, I have participated in local politics, particularly as the founder and president of Students for Public Power @UM. As a student chapter of Ann Arbor for Public Power, we advocate for affordable, equitable access to electricity throughout Ann Arbor, Michigan. These experiences have enriched my life and helped me build strong networks professionally and personally. Engaging with local communities and giving back through education and other community-building activities helps me maintain motivation and ensures my research is not occurring in a bubble.

As a PhD student at the University of California-Santa Cruz, I would continue identifying ways to engage the broader community with science through collaborations with local museums and in my teaching opportunities. In particular, I'd be interested in developing interactive exhibits for the Marine Discovery Center, where visitors can visualize human impacts on biodiversity in a hands-on way. I look forward to fostering vibrant, inclusive environments at UC-Santa Cruz while studying rapid environmental change, something close to my heart.