

Tucson Bee Collaborative: engaging 2-year and 4-year college students in specimen-based research

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(AU) Authentic natural history museum experiences to prepare students for global challenges, Lecture Theatre 3, Appleton Tower, 11 Crichton Street, EH8 9LE, June 7, 2022, 11:30 AM - 1:00 PM

People – researchers, educators, students, artists, citizen scientists – in southern Arizona concerned about the environment are coming together in the Tucson Bee Collaborative. Aimed at increasing knowledge of native bees and the importance of pollination writ large, the Tucson Bee Collaborative celebrates biodiversity and empowers community members to be part of regional conservation efforts. Founded on the principle that well-curated natural history collections have always been, and will always be, the foundation of modern biology, the University of Arizona’s Insect Collection (UAIC) plays a central role in the Collaborative. The collection houses over 2 million specimens including 16,000 native bee specimens acquired during the Arizona-Sonora Desert Museum’s long-term native bee survey and monitoring project, as well as 100,000 additional specimens of native bees from collections made throughout the Sonoran Desert Region over the past 60 years. The Collaborative aims to grow the UAIC collection of native bees to represent every species in southeastern Arizona and to reveal the DNA sequence of a portion of the cytochrome c oxidase subunit I gene (the animal “DNA barcode”) for at least one specimen of every species, and then make those sequences publicly and freely available to enable future biotic survey and monitoring projects. By involving college students from Pima Community College and the University of Arizona in the process of obtaining and publishing the data, we are training Arizona’s future workforce. Through our network of course-based undergraduate research experiences (CURES) students build community connections, obtain biotechnology skills and come to understand the importance of specimen-based research and natural history museums.

