

BEYOND PERMITS: EXPANDING FIELDWORK PROTOCOLS TO INCLUDE RELATIONSHIP BUILDING WITH INDIGENOUS COMMUNITIES. D. M. Scalice¹, M. Kirven-Brooks,¹ A. L. Gronstal¹, K. G. Gardner-Vandy² ¹NASA Ames Research Center/NASA Astrobiology Program (daniella.m.scalice@nasa.gov, melissa.kirven-brooks@nasa.gov, aaron.l.gronstal@nasa.gov). ²Oklahoma State University (Member of the Choctaw Nation of Oklahoma, kat.gardner-vandy@okstate.edu)

There are no data, there is no information, knowledge, or understanding of our Universe, the Earth, or ourselves that is worth having if the gathering of it causes harm...to people, communities, or the planet itself.

Scientific field work is a very special phenomenon. It represents direct relationship with, direct query of lands/waters/skies/plants/animals toward new knowledge. Scientists broadly recognize this privilege and respect it, sharing the desire to care for and protect the sites they work in with other entities such as conservation groups, government land management groups, and private citizens. It is arguable that no group has a greater desire to protect and nurture the land more than Indigenous Nations, Tribes, Bands, and communities. This is common ground upon which much can be built.

Even with the best of permitting processes, there is a difference between legal permission to obtain samples in field research and ethical conduct with respect to the land. Thus far, ethics have been applied to conduct among researchers while they're in the field (anti-harassment), as well as care for the field site itself (environmental protection). In some cases, limited protections for cultural aspects of the land in places such as National Parks exist, and some permitting processes account for this. This should be celebrated.

Now, there is an opportunity to expand and deepen the concept of ethics in field research to honoring the cultural provenance and tribal relationship to the land, and supporting researchers to develop relationships with tribal communities as part of their professional process with respect to field work. It is time for a radical reimagining of our relationship and responsibility to our work as scientists, especially where the lands, waters, and skies in which we'd like to do our work are concerned. Because they do not belong to us. They are not ours. They belong to the original peoples...and the original peoples belong to them.

To do this, we encourage the expansion of protocols/codes of ethics to govern responsible research practices in scientific field work. These protocols can guide the scientific community toward deeper knowledge and respect for tribal relationships with the land, and into right relationship with tribes to ensure science is not complicit in continuing the legacies of colonialism.

It is increasingly recognized that Indigenous communities are experts of their lands/waters/plants/animals/skies, and resident in their knowledge systems are extremely longitudinal, high-resolution data sets of place. These data sets are intersectional across many scientific disciplines,

including astronomy, geography, geology, climate and environmental science, oceanography, ecology, biology, and agriculture, embodying for ages the interdisciplinary aspirations we hold for the sciences today.

At a minimum, tribes must be involved in scientific field work to ensure they have free, prior, and informed consent to all that happens on their lands, regardless of whether or not those lands are "legally" held by the tribe, and regardless of what legal permitting processes to conduct field work entail. In healthy relationship and collaboration, scientists and tribes can realize new knowledge through shared field work that brings together the best of both knowledge systems.

The scientific community has an opportunity to lead in this process and set the example for other sectors (government, industry, etc.). Those who fund the science, including NASA, have a responsibility to set expectations and standards, and support and guide toward the expression of these ideals.

We advocate that the scientific community ask the question, how can we build relationships with Indigenous communities and their places/spaces in which we desire to do our science, so that the work can be done in a just, generative, and restorative way? When we do this, we'll be able to see how the work will be influenced, uplifted, and indeed made whole...when all knowledges and ways of knowing—from both Western and Indigenous scientific traditions—are part of it.

References: [1] Gardner-Vandy K. and Scalice D. M. (2020) Relationships First and Always: A Guide to Collaborations with Indigenous Communities. Bulletin of the AAS, 53(4). <https://doi.org/10.3847/25c2cfef.0de1af1a> [2] David-Chavez D. & Gavin M. (2018). *Enviro Res Letrs* 13, 123005. [3] Red Road to DC, A Totem Pole Journey for the Protection of Sacred Places (2021) <https://redroadtcdc.org/sovereign-nations/>. [4] University of Hawai'i Sea Grant College Program and Kua'aina Ulu 'Auamo (2017) Kulana Noi'i <https://seagrant.soest.hawaii.edu/kulana-noii/>