Towards Safe and Inclusive Field Teaching Experiences

From the Anti-Racism Action Committee to Chair Kari Cooper
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Proposed Action: A specific list of recommendations for safer and more inclusive field experiences are proposed for adoption. The recommendations are divided into a list of recommendations that specifically address race and an additional set of recommendations aimed at improving safety more broadly.

Why: Fieldwork can present a barrier to student success that is felt disproportionately by students of color, women, and by students with less money. Field geology has a racist and colonialist legacy with limited regard for indigenous populations. Some field trip participants may experience racist threats or violence. In general, institutional field safety plans have focused on one aspect of safety - physical safety. A modern view of field safety encompasses all aspects of the field experience as it impacts both physical and mental well-being.

"Negative field experiences are common for BIPOC scholars. One might argue that it is not the job of institutions to protect students from the world, but this mindset can result in the inadvertent exclusion of BIPOC students who feel they must remove themselves from potentially dangerous situations."* - Anadu et al. (2020) EOS.
*BIPOC refers to Black, Indigenous, and People of Color

Contents:

Purpose: People of color disproportionately face barriers to participation in fieldwork. These barriers arise due to systemic racism, overtly racist behavior, microagressions, harassment and discrimination. This document presents a set of recommendations that aim to increase the safety and sense of belonging of historically marginalized participants, especially students, engaged in field research. These recommendations should be incorporated in the planning of field activities and given equal consideration to other aspects of field safety. We recognize that not all of the suggestions below are directly related to race. However, implementing these changes will enhance the safety and comfort of field experiences for the entire EPS community, particularly BIPOC participants.

***Audience*:** All members of the department leading and participating field activities, especially instructors, teaching assistants, and students in field courses.

Specific Recommendations to Reduce Racism:

1. The department should develop a **code of conduct** for fieldwork. Instructors and other field leaders should distribute the code of conduct and **resources for reporting and responding to incidents involving bias, hate, and harassment** to participants and require a signed acknowledgement from all participants at the beginning of any course with a fieldwork component. The department should consider creating a post-event survey that all field trip participants must complete upon return.
2. Instructors and other field leaders should discuss and plan responses to **discriminatory incidents** in the field and encourage bystander intervention. TAs, instructors and other field leaders should know and practice the 5D strategy (direct, distract, delegate, delay, document[1]).
3. If the fieldwork involves **shared tents** or **shared lodging**, the field leader should discuss with participants how shared rooming decisions will be made, present a rooming plan to the participants prior to trip departure, and offer participants an opportunity to confidentially approve or decline any shared rooming arrangement.
4. Instructors should consider including a **land acknowledgement** on course syllabi and/or assignment handouts. Information about indigenous land history can be retrieved via 'native-land.ca' and through site-specific searches.
5. The Department should provide participants with **identifying clothing** such as high-visibility vests or department logo apparel (e.g., hat or shirt) to legitimize their presence.
6. Instructors and other field leaders should consider the **impacts of choice of field destination** on participant safety and sense of belonging, especially for **required courses.** Field leaders should consider in particular the history of racism at the field destination, in addition to gender, sexuality and accessibility related issues.
    a. International field trips - undocumented students cannot travel internationally
    b. Trips near the US-Mexico border - research CBP checkpoints and regularly-patrolled areas prior to planning trips. *example:* there is a fixed CBP checkpoint near Brawley, CA.
    c. Trips to countries where only heterosexuals have legal status, women are required to wear specific clothing, or violence against specific groups of people is rampant.
    d. Field leaders should identify accessibility issues for students in the course and make accommodations as necessary.
7. The department should maintain a **lending library of field clothing and equipment** to offset the very significant costs associated with participation in field trips associated with department courses. *Note: AWG is in the process of establishing this library.*
8. The department should find ways to support necessary **personal equipment purchases** (such as boots).
9. Instructors should provide students with information about **financial and material costs and assistance** (e.g., on the course syllabus) so that cost is clearly communicated and is not a barrier to participation.

[1] See https://www.ihollaback.org/bystander-resources/ for example.

Additional recommendations:

10. Instructors should provide students with a 'what to expect on this trip' handout that includes information about the trip plan and safety, emergency contact information, and information about when bathroom facilities will be available during the trip.
11. The department should create a **field safety website** (either public-facing or through epsinfo) that provides department-specific information about fieldwork policies, procedures, and best practices.
12. The department should address vehicle safety in the field through required safe driver training and by setting policies on **when, in what weather conditions, and for how many hours** vehicles may be operated **and by whom**. (following NAGT best practices)[2]
13. Provide **onboarding** to new faculty, staff, and student hires to make them aware of the existence of department policies and the **University policy on fieldwork:**
    See UC Field Safety Manual for more information.
14. The department should require everyone engaged in field research and teaching (instructors and TAs) to take a **Wilderness First Aid (WFA)** course. An exception policy should be developed to accommodate those who cannot do so.
15. The department should require all employees (including faculty, staff, GSA and GSR employees) participating in field work to comply with the **Cal/OSHA Heat Illness Prevention Standard, Title 8 CCRS 3395.**
16. Groups working in wilderness settings with no cell service should carry a **satellite-based SOS** device such as SPOT/InReach or a satellite phone. These are available through the University:
    https://safetyservices.ucdavis.edu/units/ehs/research/field/equipment-loans

[2] https://nagt.org/nagt/teaching_resources/field/index.html
https://nagt.org/nagt/teaching_resources/field/safety/reduce-risk.html

Background

Field education is an important component of undergraduate training in Geology and across the geosciences. There is no substitute for the experience gained through physical examination of the rock record, the morphology of the natural landscape, Earth's hydrosphere, and the biosphere. Many students are attracted to the Geology major based on the opportunity to work outdoors, to observe nature, and to contribute to environmental health (e.g. Hoisch and Bowie, 2010). Enjoyable outdoor experiences are recognized as an important factor that guides students towards the Geology major. Students who grow up with many positive outdoor experiences seek out geoscience majors (Stokes et al., 2015). However, students of color and students from less affluent backgrounds are less likely to have had outdoor experiences. As a result, they are less likely to choose geoscience majors (Stokes et al., 2015).

In addition to the absence of positive factors, such as childhood outdoors experience, students of color face negative factors (harassment, intimidation, discrimination) associated with fieldwork that lead to loss of talent from the discipline. Because of very low representation, it is difficult to statistically assess the race-related factors that contribute to exclusion of minority scientists (e.g., Clancy et al., 2014). However, it is widely reported that students of color experience racism in the field (e.g., Lanham, 2016; Dowtin and Levia, 2018; Anadu et al., 2020; Demery and Pipkin, 2020). Such experiences include challenges to legitimacy and belonging, threats of violence, armed confrontations, and racist speech/iconography. Researchers of color experience racist incidents in a variety of field settings ranging from urban to rural. Hence the need to consider the possibility of racism and to make an appropriate plan for how to respond is not unique to any one field setting (e.g. working on Federally-managed land in rural Nevada vs. in a public park in the Bay Area).

Cost can be a significant barrier to participation in field activities. The equipment required for participation in the required undergraduate courses for the Geology major is at least $500-1000[3] and this cost is 'hidden' in the sense that it does not appear as a course material fee. Because field learning outcomes depend on student comfort (John and Khan, 2018), which is a prerequisite for mental well-being, students who are able to buy better equipment have an advantage relative to students who cannot afford ideal gear. In general, equipment specific to women and to people with body types that do not conform to "outdoor" stereotypes is more expensive or may not exist. Participation in field courses also causes many students to miss hourly work during the academic year or miss hourly- to full-time employment opportunities during the summer. When lost wages and dependent care are included in cost estimates, students could spend $2,000 to participate in a 5-day field course. The high cost of field training, much of which is hidden (not included in tuition and fees), is a barrier to increasing diversity in the geosciences (Abeyta et al. *in review*).

Stressors associated with physical hardship, social pressures, and mental state can have a significant negative impact on scientists' ability to learn (John and Khan, 2018). Negative factors affecting mental health include perceived danger, lack of privacy, social isolation, and exclusionary social behavior (John and Khan, 2018). All of these factors may disproportionately affect people of color, who are more likely to feel unsafe and unwelcome in the field. Averting

[3] Boots $120, hiking socks $30, tent $150, sleeping bag $100, sleeping pad $75, warm hat and gloves $50, insulating jacket $100, rain jacket $50. See Abeyta et al. (2021) for more detailed estimates.

and mitigating negative experiences associated with racism will create a better learning environment for students of color.

UC Davis has an institutional commitment to the education of undocumented students, including AB450 students. Travel can be unsafe for undocumented students. US customs and border patrol (CBP) has the authority to stop vehicles and question occupants within 100 miles of any international border, which includes the California coast. In addition, permanent checkpoints exist along many highways in southern California. When planning fieldwork, instructors should consider the route taken to and from the field site and assess the possibility that participants will travel through a checkpoint. In addition, international travel is not possible for undocumented students, and some countries have policies or cultures that actively exclude people based on race, ethnicity, religion, gender and/or sexuality. The risks to all participants in a field activity must be considered in the earliest planning stages of any field activity, but importantly also the potential risks to those who are not currently represented.

It is in the interest of the Department to maximize the intellectual growth of students, teaching assistants, faculty, and researchers during field experiences. Doing so will increase the quality of the science that we are able to do together and support the growth and professional development of our students and researchers. The list of actions in this proposal draws from specific suggestions made by BIPOC scholars (Demery and Pipkin, 2020; Anadu et al., 2020).

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Checklists:

Before planning field work:

- ▢ Inform participants about available gear (lending library) and financial support.
- ▢ Discuss bystander intervention training with field work participants.
- ▢ Consider the impacts of the trip location on participant safety.
- ▢ Identify site-specific hazards, including physical, wildlife and cultural.
- ▢ Develop a response plan for each hazard and request feedback from participants.
- ▢ All drivers should take the Safe Driver training course.
- ▢ All personnel should take the Heat Illness Prevention training if temperatures >95°F may be encountered. https://safetyservices.ucdavis.edu/training/heat-illness-prevention
- ▢ Leaders should take Wilderness First Aid (WFA) training through UC Davis or another source. https://safetyucd.sf.ucdavis.edu/units/ehs/research/field/training

Before departing for field work:

- ▢ Complete a field safety plan (UC Davis template): (https://ucdavis.app.box.com/s/9395kqk32r8aiuhuy510dhb7fgr8qqzy)
- ▢ Identify land managers and notify them that a student group will be present.
- ▢ Research the route traveled to and from the field site and whether vehicles might encounter CBP checkpoints.
- ▢ Obtain permission (and any permits needed) for sampling or collection.
- ▢ Research and prepare a land acknowledgement for the destination. Provide it to participants.
- ▢ Arrange to borrow communication and medical equipment from UCD Field Safety, if appropriate. Available equipment includes InReach two-way satellite communication devices, first aid kits, and portable Automated External Defibrillators (AEDs).
- ▢ Provide a copy of the response plan and emergency contact information to all participants and an emergency contact not on the trip.
- ▢ All participants should complete the Campus Field Trip Waiver and Student Information Waiver (https://epsinfo.geology.ucdavis.edu/forms/fieldtrip.php). One copy stays in the department and one copy should stay with the lead field instructor during the trip.
- ▢ Any trip that will use equipment from the field storage room must be added to the department field trip calendar.
- ▢ Inventory the needed equipment and confirm that it is in working order.
- ▢ Inspect the vehicles. Check the function of signals, HVAC, spare tire, jack. Check for gas, brake, engine, and transmission issues. Check for tire chains if appropriate.

Upon return:

- ☐ Discuss the experiences of participants and solicit suggestions for future trips. Consider a post-trip feedback or experience survey.
- ☐ Tell the field equipment coordinator about any missing or damaged items
- ☐ Log and replace any items that were used in the first aid kit

Additional Field Safety Resources:

- UCR 2021 Fieldwork Toolkit Leadership Training Series: https://training.ucr.edu/fieldworkleadership
- Campus Field Safety Planning: https://safetyucd.sf.ucdavis.edu/units/ehs/research/field/planning
- Campus Field Safety Plan (template): https://ucdavis.app.box.com/s/9395kqk32r8aiuhuy510dhb7fgr8qqzy
- UC Field Operations Safety Manual: https://ucdavis.box.com/s/vd3ytthnypb5gy00f6e858gskqlm03xk
- ADVANCEGeo Field Resources: https://serc.carleton.edu/advancegeo/resources/field_work.html
- NAGT Safety in the Field: https://nagt.org/nagt/teaching_resources/field/safety/index.html