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Who are we? Highlighting nuances in Asian American experiences in ecology and evolutionary biology

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In many sectors of United States society, Asians are viewed as a monolith and grouped into the broad category of Asian American Pacific Islander, or AAPI (Iftikar and Museus 2018). However, it is important to acknowledge the history of the term Asian American and nuances between AAPI ethnic groups in the United States if we are interested in promoting racial justice in the field of ecology and evolutionary biology (EEB), other scientific fields, and society at large.

To provide a brief history, the terms “Asian American” and “AAPI” arose following activism in the 1970s by Asian and Pacific Islander communities to gain legal protection as a racial category in the U.S. (Museus and Kiang 2009). The organizers and activists intended to use Asian American as a solidarity-building term and were directly influenced by Black organizers and the Black Panther Party (Ogbar 2001).

However, as the Asian American population has continued to grow and diversify in the U.S. (Hoeffel et al. 2012), we argue that it is important to critically question and highlight the underlying assumptions people have of Asian Americans and redefine how it should be understood, used, and applied today. Otherwise, we risk erasing the unique differences between Asian Americans and Pacific Islanders, as well as between Asian American ethnic groups, and countering the term’s original goal of building solidarity. Ignoring how Asian American demographics have shifted in the U.S. can also overshadow differences in lived realities and unique intersectionalities (e.g., LGBTQIA+, socioeconomic status, mixed heritage).

As ecologists and evolutionary biologists, it is important to recognize that issues surrounding AAPI do not exist in a vacuum and that these issues affect some of our students and colleagues. Recently, anti-Asian racism has been brought to the forefront of U.S. society. Though media attention has primarily focused on how COVID-19 fears motivated both violent and nonviolent racist incidents against East Asians in 2020 (e.g., Chinese and Taiwanese Americans), attacks on other AAPI groups, such as South and Southeast Asians (e.g., Filipino, Pakistani, and Vietnamese Americans), have continued to occur. Thus, there is a need to both

discuss and address how issues of racism toward the AAPI community manifest in our own academic communities.

Here, we will examine anti-Asian racism in EEB and provide recommendations on how individuals, departments, and professional societies can combat it. No one piece can capture the entire complexity and nuances surrounding AAPI groups in academia and society, and we recognize that Pacific Islanders have experiences that are different from those of Asian Americans. At the same time, we want to state that the authors who identify as Pacific Islanders stand in solidarity with Asian Americans who have been targeted in recent incidents and will address issues specific to Pacific Islanders in a future piece.

Double-edged racism: foreigners and model minorities?

Racism presents a double-edged sword for Asian Americans, who are often seen as both foreigners and model minorities. Both categories have the potential to trigger outright xenophobia and conscious and unconscious racism, including macro- and microaggressions, bias, and stereotyping (Figure 1). However, anti-Asian racism does not always manifest in the same ways across groups, including groups that are not categorized into either dichotomy. For example, majority groups often view Asian American scientists as foreigners that lack ingenuity, leadership potential, and credibility (Poon et al. 2016). In contrast, the model minority myth for Asian Americans is pervasive, particularly in academia and science, and results in racist and biased assumptions about academic aptitude and economic background (Museus and Kiang 2009, Poon et al. 2016). As model minorities, Asian Americans are often used to uphold white supremacy by valuing “proximity to whiteness” and putting Asian Americans in competition with other minority groups (e.g., Hispanic or Black Americans, Indigenous Peoples; Poon et al. 2016). Additionally, some Asian American groups have stereotypes outside of this dichotomy (e.g., being viewed as “gang members, dropouts, and welfare sponges”; Iftikar and Museus 2018). Overall, the consequences of being aggregated into the Asian American monolith of foreigners and model minorities disproportionately impacts minoritized Asian American groups (e.g., Filipino, Hmong, Sikh, Vietnamese, etc.), and may contribute to the recruitment and retention of individuals belonging to these groups, and subsequent disparities in PhDs awarded to these same individuals.

Who counts? Disaggregation of Asian American data exposes under- and over-representation in the biological sciences

An important step to disrupting the different ways that anti-Asian racism manifests in EEB is to change the practices our discipline uses to collect and present demographic data. Using broad racial or ethnic groupings (e.g., Asian, Asian American, or Asian American and Pacific Islander) or even broad disciplinary categories (e.g., biological sciences) can hide important nuances about the impacts of systemic inequities (Teranishi et al. 2020). For example, the National Science Foundation (NSF) reported that the proportion of Ph.D. recipients in the biological sciences who identified as Asian was ~11% from 2006-2016, which exceeded the ~6% of Asian Americans in the U.S. population (National Center for Science and Engineering Statistics 2021). These data support the prevailing belief that Asian Americans are not minoritized in the biological sciences. But data aggregation masks a more complex reality: Asian Americans are overrepresented in *some* biological subfields and minoritized in others. In 2019, for example, Asian Americans represented ~10% of PhDs in microbiology compared to only 6% and 3% of PhDs in evolutionary biology and ecology, respectively (National Center for Science and Engineering Statistics 2021).

Disaggregation of demographic data in the sciences reveals important nuances about the experiences of marginalization *within* the Asian American community. Previous work has shown that Asian American groups have varying levels of bachelors, masters, and doctoral degree attainment due to differences in immigration history and access to economic and social capital (Nguyen and Segui 2020). In addition, Asian American students experience racism in higher education differently, with Southeast Asian students reporting a lower sense of belonging on college campuses than East Asian students (Nguyen et al. 2018). Yet, Asian Americans continue to be an “invisible minority” (Museus and Kiang 2009) in discussions about racism in higher education.

We urge ecologists and evolutionary biologists to take a different path. By thinking critically about the ways we collect, present, and interpret data about students in ecology and evolution, we can attend to the different ways students experience racism in our field and build more inclusive learning spaces (Cheng et al. 2021). Specifically, recognizing the heterogeneity of the Asian American experience with marginalization positions us to address the specific barriers that exclude Asian Americans in labs and department spaces; eliminate policies that allow organizations to deny funding for minoritized Asian Americans; and increase the representation of Asian Americans in faculty and other leadership positions.

Exclusion from diversity, equity, and inclusion (DEI) initiatives in professional societies

Because of the foreigner and model minority stereotypes, professional societies have thus far ignored the needs of minoritized Asian American groups. For example, aggregation of Asians and Asian Americans for conference demographic evaluations masks cultural differences in the way Asians and Asian Americans experience and acknowledge racism (Figure 1) and the different types of privilege among Asian American groups (see Mateos et al. 2009 for an in-depth discussion of issues related to demographic aggregation of ethnic groups). Additionally, Asian Americans may not be viewed as minorities, leading them to being excluded from DEI programs altogether (Figure 1).

Conference planners overlook the needs of minoritized Asian American groups when they adopt NSF's definition of underrepresented minority, which excludes Asian Americans. Without collecting disaggregated demographic data, societies make funding opportunities inaccessible for these groups, further uphold barriers to advancement, and can exclude Asian Americans from participating in the diverse communities they claim to support. The lack of data on specific groups within the Asian American (or even more broad, AAPI) category masks a problem we face systematically in our communities, societies, and funding agencies: we lose sight of true zeroes in representation (i.e., no individuals included from an ethnic group). That is, Asian American representation does not necessarily lead to equality or equity for all Asian American groups. Thus, we recommend that professional societies incorporate minoritized Asian American groups using clear language, defined by disaggregated data, in DEI initiatives, funding sources, and networking opportunities.

In addition, we recommend that professional societies take a more active role in creating spaces for Asian American scientists in EEB. For example, conferences should provide a platform for networking, which can have lasting impacts on the professional identity of early career researchers. Mentoring programs at conferences can also aid in the retention of minoritized Asian American groups and strengthen solidarity among minoritized groups. These connections can further provide career-long community support not found at individual institutions and facilitate career transitions between institutions. For Asian Americans, and especially for Asian American women, gaining this type of social capital can diminish barriers to leadership positions (Li 2014).

Limited currencies of productivity available to Asian American groups

Beyond professional societies, personal and institutional funding for Asian American scientists in EEB at all career stages are limited by the systematic failure to recognize the nuances between Asian American groups. Personal support in the form of salary and fellowships are characteristically lower for Asian Americans in EEB, resulting in stunted career trajectories and productivity (Min 1999, Endo 2015). Moreover, federal funding agencies do not recognize any Asian American ethnic groups as underrepresented, despite the fact that some groups are drastically minoritized in specific disciplines, especially at advanced career stages (Bartolone et al. 2014). We attempted to illustrate this example with Filipino recipients of NSF awards; however, this ethnic group is invisible under NSF demographic aggregation and further demonstrates a need to disaggregate demographic data. Additionally, research productivity (e.g., grants, publishing) of Asian American scientists is impacted by name discrimination and disproportionately increased service loads compared with their white colleagues (Lee et al. 2013, Silbiger and Stubler 2019).

We recommend that funding agencies disaggregate demographic data by ethnic group to facilitate the recognition of specific minoritized groups within AAPI in grant awards and available funding opportunities (i.e., those targeted at increasing diversity in EEB). Funding is central to recruitment and retention. Disaggregating demographic data is therefore necessary to explicitly understand which groups within AAPI are minoritized in specific fields. Funding opportunities for these groups must be made available as they are to other minoritized groups, and these distinctions must be made clear at the institutional level (e.g., this should not be left to advisor discretion).

Moving forward

Recognizing what unites ethnic groups under the AAPI term is equally important as acknowledging their unique privileges and disadvantages. As our academic communities become more diverse, we must recognize the nuances under solidarity-building umbrella terms, otherwise we risk further invisibilizing minoritized groups. Moving forward, we encourage our AAPI colleagues to advocate for the representation and inclusion of other minoritized groups in our shared academic spaces and recognize the solidarity that we have built with minoritized groups. This means engaging in sustained solidarity with Black/African American, Hispanic, and Indigenous scientists; advocating for their needs while recognizing this anti-racism fight is not a zero-sum game. We also urge all our EEB colleagues to engage in continued learning about the

history of AAPI, including about our solidarity with other civil rights movements and the nuances of AAPI inclusion and exclusion in the scientific community (see Box 1). Professional societies and funding organizations should evaluate their eligibility criteria for who constitutes as minoritized. Data disaggregation requires additional labor but leads to a clearer understanding of barriers to diversity, equity, and inclusion in our field and what we can do to remediate them. The recommendations provided here are not meant to be an exhaustive list, but rather the first of many steps that the field of ecology and evolution should take to create lasting structural changes that benefit all.

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The design for Figure 1 was inspired by artwork from Mira Jacob's "Good Talk," a graphic memoir about Asian American identity. V.B. Chaudhary is supported by the National Science Foundation (award DEB-1844531).

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Box 1.

Suggested Readings

Shorter reads and videos

- AAPI Data (*URL: <https://aapidata.com>*)
- Asian Americans (*URL: <https://www.pbs.org/show/asian-americans/>*)
- Asian American Identity, Vox. (*URL: <https://www.vox.com/asian-america>*)
- Budiman, A. and N.G. Ruiz. 2021. Key facts about Asian Americans, a diverse and growing population. Pew Research Center. (*URL: <https://www.pewresearch.org/fact-tank/2021/04/29/key-facts-about-asian-americans/>*)
- Jin, C.H. 2021. 6 Charts That Dismantle the Trope of Asian Americans as a Model Minority. NPR. (*URL: <https://www.npr.org/2021/05/25/999874296/6-charts-that-dismantle-the-trope-of-asian-americans-as-a-model-minority>*)

Longer reads

- Lao, M. The Case for Requiring Disaggregation of Asian American and Pacific Islander Data. *California Law Review*. (*URL: <https://www.californialawreview.org/the-case-for-requiring-disaggregation-of-asian-american-and-pacific-islander-data/>*)

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Box 1. Suggested readings for continued learning about Asian American Pacific Islander history, issues, and potential solutions.

Figure 1. Asian Americans in academia often encounter a variety racist and xenophobic comments that reinforce negative stereotypes and enhance feelings of exclusion or alienation.

Figure 1.



Perpetuating the perennial foreigner myth

"Where are you really from?"

"Your English is so good!"

Praising proximity to whiteness

"You barely even look Asian!"

"You don't even have an accent!"

Racist biases about interests, abilities, or privilege

"You should do data analysis instead of field work."

"I gave the funding to someone who really needs it."

Poor knowledge of Asian Americans in EEB

"Are Asians even minorities?"

"What are you? Do you qualify for minority funds?"

Name discrimination or citation bias

"I can never remember the author of that paper!!"

"I'm not even going to try to pronounce that name!"

Perpetuating invisibility

"I thought you were that other Asian person; you look so similar!"

"I don't think of you as Asian."

Overt racism or xenophobia

"You are a %#&*! (Asian slur)."

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"You don't belong here."

"Go back to where you came from!"