## 19 July 2020

Dear Society for Marine Mammalogy Leadership,

Please find enclosed a petition asking the Society to take a leadership role in eliminating the reliance on unpaid work in marine mammal science. The pipeline of unpaid positions in our field limits diversity and should no longer be part of the status quo. This petition has been signed by 727 people from many different specialties, nationalities, and career stages, and also includes signatures from people who opted not to pursue a career in marine mammal science due to this and other barriers to participation. Here, we provide some additional context for this petition and address some of the feedback we have received in response. We want to be clear that this cover letter does not necessarily reflect the views of and was not endorsed by the co-signers of the petition.

First, we commend the Society on recognizing the need to address diversity and inclusion in the field, through both the formation of the Ad Hoc Diversity and Inclusion Committee and outgoing President Ann Pabst's Letter to the Community Regarding Racial Injustice. We welcome efforts from incoming President Charles Littnan to reach out to the community for suggestions to improve the Society. However, these gestures must be supported by actions.

We propose to the Society that taking a leadership role in eliminating unpaid work is an achievable action that could change the field for the better. We are not arguing that this is the only or the most important action that the Society can take. For example, it is important to engage diverse young people in science at every stage of education. But why recruit people from underrepresented groups into the field only for them to be later excluded by systemic barriers including the expectation that they work months or years without pay? The transition between undergraduate and graduate education, which is where many unpaid positions are undertaken, has been identified as a "strategic point of loss" for underrepresented minorities (1,2). Therefore, we point to the elimination of unpaid positions as a targeted mechanism for increasing diversity in the field.

Our petition focused specifically on the role of unpaid positions in reinforcing the existing racial and socio-economic makeup of the Society. We also recognize that race, class, and gender intersect within STEM to exclude and/or hinder career progression of some groups more than others (3–5). We believe that action to reduce reliance on unpaid labor will not only increase diversity, but make the field more inclusive, innovative, and facilitate career progression for women and minorities who have historically and presently not been well-represented in supervisory and leadership positions (6–8).

We have received a lot of positive and constructive feedback to this petition. In addition to the responses publicly circulated on MARMAM, members of the community sent personal emails and commented on Twitter and Facebook posts. Objections to the petition have mostly fallen into two categories: first, people who have benefitted from unpaid positions and therefore believe them to

be positive and second, people who are concerned that some organizations will not be able to function if they are unable to rely on pay-to-play arrangements or unpaid workers.

We don't disagree that unpaid positions can be beneficial to some people. What we argue is that unpaid positions are not equally available to everyone and serve primarily to promote those who are already privileged. Personal accounts of positive outcomes from unpaid positions are a product of survivorship bias and should be considered in that context. People who have experienced negative outcomes from unpaid positions are less likely to remain in the field and therefore their personal accounts are not part of the current discussion (9). Research has shown a limited connection between unpaid work and future career success, with success associated with having personal connections (10). This further confirms that the pipeline of unpaid positions reinforces existing privilege.

We also agree that reducing reliance on unpaid labor is likely to be disruptive to existing funding structures. However, it is disingenuous to use potential harm to small organizations as a rationale for maintaining the status quo when many large, well-funded institutions with multimillion-dollar annual budgets also use unpaid workers. For example, we heard from a student who recently did a six-month unpaid internship on marine mammals at the Monterey Bay Aquarium, which has an annual operating budget of over 100 million USD (11). Many other large marine science and conservation organizations in the US -- including the National Oceanic and Atmospheric Administration and the World Wildlife Fund -- also use unpaid workers (12–14). We use examples not to single out these institutions in particular, but to illustrate that the reliance on unpaid labor is not limited to small organizations struggling to conduct research on shoestring budgets.

Representatives of small organizations that rely on research grants have pointed out that a major obstacle to paying workers is the fact that many funding bodies (including the Society's Grants in Aid of Research (15)) do not allow funds to be used for salaries. This is unacceptable. Labor is a fundamental component of research and should be budgeted for in grant applications whenever needed. We advocate for the Society to change its policy on this matter immediately and consider applications that include funding for salaries. We hope that this petition and any resulting actions taken by the Society can be a catalyst for organizations to find ways to pay all workers and encourage people to lobby for change within their individual organizations and to funding bodies. For too long, we have considered paying some workers to be optional, and have structured our financial commitments accordingly. It's time to reprioritize and reallocate funding. Just as research cannot happen without access to certain equipment and supplies, it cannot happen without labor.

Determining how we eliminate the reliance on unpaid labor in practice will require community input, willingness to change, and real work. Here, we include some of the constructive suggestions we have received from the community in response to this petition.

• There is a need to describe the differences between volunteering, ecotourism, interning, and employment and the expectations associated with each. We recognize that different countries use different legal definitions of some of these terms and advocate that all

organizations comply with local law. However, community definitions may be a useful starting point to develop a shared understanding of and appropriate advertisement for these different types of opportunities. In the interest of starting this conversation, we suggest the following definitions:

- Volunteering takes place for a few hours a week or on an ad-hoc basis; the total time commitment is on the order of hours to days and does not preclude full-time employment. The work is typically not related to one's career and is not a required step for advancing one's career.
- Ecotourism is a leisure activity for people interested in wildlife and conservation to experience the natural world and support research. Ecotourism is not typically related to one's career and is not expected to advance one's career. Pay-to-play opportunities (such as when "interns" pay a fee in order to participate) fall into this category.
- Internships are short-term paid positions (weeks to months) and are understood to be entry-level positions where the intern both contributes labor and receives training, guidance, and mentoring. More work is accomplished because the intern is there than would be otherwise, and the work the intern undertakes is not menial. The goal of an internship is to introduce someone to a potential career path.
- Employment would typically be a longer-term paid position (months to years), may or may not be menial, and may or may not include training and mentoring.
- Some have argued that providing room and board is adequate compensation for entrylevel workers. While offering room and board is commendable and a step in the right direction, it is not sufficient. The problem with these arrangements is that they make assumptions about the family structure and financial stability of workers. We advocate that interns and employees be paid local minimum wage and provided with room and board if their work requires them to be away from home.
- We also received feedback highlighting that it can be difficult to obtain work visas for different countries, but possible to travel and volunteer with organizations instead. This is related to the issue of payment versus compensation as discussed above. In these situations, reimbursement for travel and/or room and board may be acceptable in lieu of payment. However, it is important to consider this in the context of parachute science and promote the development of local capacity wherever possible (16).
- A major component of positive internship experiences is good mentoring, and people have suggested that the development of best practices for mentoring ECRs in marine mammal science could improve the quality of internships in the field.
- Similarly, we look forward to reading an upcoming article in the Journal of Environmental Studies & Sciences on guidelines for ethical internships and suggest that such guidelines be adopted or developed for internships in marine mammal science.

- People have advocated for increasing both attraction and retention of underrepresented minorities. In addition to making positions more attractive by offering adequate pay, efforts could include partnerships with HBCU and other minority-serving institutions and mentoring programs to help ECRs break into the field. Científico Latino has recently piloted such a program (https://www.cientificolatino.com/gsmi).
- Finally, there is considerable interest in creating a central fund for internships, particularly to place funded interns from underrepresented groups with small organizations and to build local capacity in developing countries. Models for this include Shatter the Ceiling (http://www.shattertheceiling.co/) and Minorities in Shark Science (https://www.patreon.com/misselasmo).

There is no silver bullet to issues of equality, diversity, and inclusion. We targeted our letter at one specific problem that we thought the Society could address, and also recognize that unpaid positions are part of a larger system of racist and classist barriers to participation. Some of the loudest objections to our petition came from people whose careers have spanned 40 years—the same 40 years in which no progress has been made to increase diversity in STEM fields (17). However, the number of signatures and positive, constructive responses we have received in response to this petition demonstrate that a strong contingent of the community is ready to make serious changes. We hope the Society can help lead the way towards a more diverse, equitable, and inclusive (1,18) future for marine mammal science.

## Sincerely,

Dr Eiren Jacobson, University of St Andrews Ms Chloe Malinka, Aarhus University Dr Margaret Siple, University of California, Santa Barbara

## Bibliography

- 1. Puritty C, Strickland LR, Alia E, Blonder B, Klein E, Kohl MT, et al. Without inclusion, diversity initiatives may not be enough. Science. 2017 Sep 15;357(6356):1101–2.
- 2. Campbell Jr G, Denes R, Morrison C. Access Denied: Race, Ethnicity, and the Scientific Enterprise. Oxford University Press; 2000. 356 p.
- 3. Williams J, Phillips KW, Hall EV. Double Jeopardy? Gender Bias Against Women of Color in Science. 2014; Available from: http://rgdoi.net/10.13140/2.1.1763.8723
- Swan E. The internship class: subjectivity and inequalities gender, race and class. In: Handbook of Gendered Careers in Management [Internet]. Cheltenham, UK: Edward Elgar Publishing; 2015. Available from: https://www.elgaronline.com/view/edcoll/9781782547686/9781782547686.00010.xml
- 5. Eaton AA, Saunders JF, Jacobson RK, West K. How Gender and Race Stereotypes Impact the Advancement of Scholars in STEM: Professors' Biased Evaluations of Physics and Biology Post-Doctoral Candidates. Sex Roles. 2020 Feb;82(3–4):127–41.

- 6. Orcutt B, Cetinic I. Women in Oceanography: Continuing Challenges. Oceanography. 2014 Dec 1;27(4):5–13.
- 7. Begeny CT, Ryan MK, Moss-Racusin CA, Ravetz G. In some professions, women have become well represented, yet gender bias persists—Perpetuated by those who think it is not happening. Sci Adv. 2020 Jun;6(26):eaba7814.
- Hofstra B, Kulkarni VV, Munoz-Najar Galvez S, He B, Jurafsky D, McFarland DA. The Diversity–Innovation Paradox in Science. Proc Natl Acad Sci. 2020 Apr 28;117(17):9284– 91.
- Archer E. [MARMAM] Unpaid positions in marine mammal science: a response [Internet]. 2020 [cited 2020 Jul 18]. Available from: https://lists.uvic.ca/pipermail/marmam/2020-July/012000.html
- 10. Fournier AMV, Holford AJ, Bond AL, Leighton MA. Unpaid work and access to science professions. Rosenbloom JL, editor. PLOS ONE. 2019 Jun 19;14(6):e0217032.
- 11. 2019 Annual Review [Internet]. Monterey Bay Aquarium; [cited 2020 Jul 18]. Available from: https://www.montereybayaquarium.org/globalassets/mba/pdf/annual-review/monterey-bay-aquarium-annual-review-2019.pdf
- IN-21003 U.S. Government Relations Fall 2020 Intern [Internet]. WWF Careers. [cited 2020 Jul 18]. Available from: https://careers-wwfus.icims.com/jobs/2666/in-21003-u.s.government-relations-fall-2020intern/job?mobile=false&width=1000&height=500&bga=true&needsRedirect=false&jan1off set=0&jun1offset=60
- 13. Internships [Internet]. NOAA Office of Response and Restoration. [cited 2020 Jul 18]. Available from: https://response.restoration.noaa.gov/about/internships.html
- 14. Beyond 2020: Vision and Strategic Plan [Internet]. Mote Marine Laboratory; 2019 Oct [cited 2020 Jul 18] p. 34. Available from: https://issuu.com/motemarinelab/docs/stratplan3.0\_ffw
- 15. Small Grants in Aid of Research [Internet]. The Society for Marine Mammalogy. [cited 2020 Jul 18]. Available from: https://marinemammalscience.org/jobs-grants/grants-in-aid-of-research-information/
- 16. de Vos A. The Problem of "Colonial Science." Scientific American [Internet]. 2020 Jul 1; Available from: https://www.scientificamerican.com/article/the-problem-of-colonial-science/
- 17. Bernard RE, Cooperdock EHG. No progress on diversity in 40 years. Nat Geosci. 2018 May;11(5):292–5.
- 18. Abernethy EF, Arismendi I, Boegehold AG, Colón-Gaud C, Cover MR, Larson EI, et al. Diverse, equitable, and inclusive scientific societies: Progress and opportunities in the Society for Freshwater Science. Freshw Sci. 2020 Jul 9;000–000.