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 AWARDEE REPORT FORM

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| NAME | Joy Reidenberg |
| TWITTER HANDLE\* *optional* | Whale Scientist @JoyReidenberg |
| UNIVERSITY | Icahn School of Medicine at Mount Sinai (New York, NY, USA) |
| NAME OF AWARD | Symington Bequest Fund Award |
| PURPOSE OF AWARD *conference/event attended/organised (full name) with city and dates.* |
| Invited Podium Speaker for the Biennial Conference on the Biology of Marine Mammals in Perth, Australia, Nov 10-16, 2024. My presentation was: **Is There a Vomeronasal Organ in Baleen Whales?** |
| REPORT: What were your anticipated benefits?*Minimum number of words between 200-400. Please write in coherent paragraphs.* |
|  One of the anticipated benefits of attending an international conference in person is to reunite with colleagues world-wide. The chance to talk with them in person helps to re-invigorate efforts on ongoing collaborations that may have stagnated. These conversations can also spark new ideas for new projects. The meetings are also opportunities to be introduced to my colleagues’ other collaborators and students. I especially like meeting the students, because I believe I learn as much (or more) from them as they learn from me. Another benefit of attending a conference in person is the opportunity to meet new scientists. If their presentations are of interest, I will seek them out afterwards for a fuller discussion. This often leads to forging new collaborations to pursue new projects.  Similarly, students and potential postdocs will seek me out after my presentation(s) to ask further questions or discuss its relevance to their own work. These discussions can lead students or postdocs to join my laboratory, department, or institution. Often, these liasons develop into future fruitful collaborations as the students graduate and become independent researchers. A conference is also the best venue to learn new ideas. I particularly benefit from listening to research or plenary presentations in other fields of interest outside of my own area of specialty. I probably would not read literature outside my own field of interest due to time constraints related to work deadlines. However, my time is “freer” at a conference because I have already dedicated that time to learning. I am not distracted by mundane work duties when I am away from my institution. Perhaps the greatest direct benefit to me is the opportunity to get direct and honest feedback on the science I present. This can be very rewarding because those questions or comments can help shape my future research directions. The comments and criticisms can be very helpful in pointing out errors or misinterpretations, or alternate interpretations. It is very helpful to get critical feedback before writing up my results for publication. Often such comments have helped me avoid having to address the same criticisms from reviewers of submitted manuscripts. I’d much rather “work out the kinks” ahead of the manuscript submission!  |
| COMMENTS: Describe your experience at the conference / lab visit / course / seminar/ event.*Minimum number of words between 200-400. Please write in coherent paragraphs.* |
|  I presented my research, which was focused in a new topic area: chemoreception (smell, taste), specifically whether a vomeronasal organ (Jacobsen’s organ) is present in whales. My prior research has been in respiratory tract anatomy, specifically the larynx, so this was a great departure from my usual area of expertise. This time, it was exciting to explore a different subject and to speculate about what our findings might mean. I met other scientists who were also doing research on chemical senses. It was extremely helpful to get their feedback, as chemoreception is a topic they knew a lot more about. Fortunately, they were willing to share their knowledge with me. They were also keenly interested in my findings, as prior work in the field indicated whales have a poor or absent sense of smell. The presence of the “pits” we found on the undersurface of the upper lip generated a lot of interest and speculations about their potential functions.  It was also rewarding to learn about other research projects, particularly those on very different topics or species from what I am studying. I really like the speed talk podium sessions. These talks allow one to learn about a large number of topics in a short period of time. I am relieved to not have to listen to the details of anyone’s methods, as I will likely not be trying to duplicate their findings. If I care enough about that, I can always ask them a follow up question after the session. Rather, speed talks encourage listeners to engage in new areas of research, risk free (i.e., not being hampered by too many extraneous details) even if only for a few short minutes. I much prefer this over the sessions devoted to my own area of interest, as I am more likely to learn many new things that might have a greater impact on viewing my research from another perspective.  |
| REPORT: In relation to skills, what were the most important things you gained? *(does not apply to equipment grant.* For public engagement/outreach awards what did your audience gain and how did you evaluate success?*Minimum number of words between 200-400. Please write in coherent paragraphs.* |
|  An important thing I gained, related to skills, was an appreciation for the use of video capture from unmanned aerial vehicles (UAV, or “drones”) for observing wild animal behaviours, particularly for observing whales at sea. Drones cause relatively little, or no, disruptions compared with traditional observation methods in which the animal can perceive the viewer. The video perspectives offered with drones are better than boat-based observations. This is because the drone view is directly down into the water. Depending upon the depth of the whale, the visibility can be quite good. This vertical axis allows whale behaviours to be recorded even when they are submerged. These behaviours are usually missed in boat-based observations, which can only record behaviours of whales that break the surface and thus are visible at a nearly horizontal angle. A second important skill I gained was a greater awareness of the language I use to communicate my science. I was unaware that some of the terms I commonly used were considered “colonizer” language and can be perceived as condescending to indigenous peoples. I am now also more aware of the importance of involving indigenous people in research being conducted on their native land and offering opportunities for them to participate equally as co-researchers in the project and be given credit aa co-authors on the publications that result (rather than just acknowledgements, as was often done in the past for participants that did not have an advanced scientific degree). I am more sensitive to cultural values and have learned how to encourage incorporating them into scientific practice. Cultural needs and scientific goals do not need to be in opposition. They can happen synergistically, with each practice aiding and informing the other so both groups learn together. Indigenous people can teach scientists about their knowledge of the natural world (e.g., how to track and where to find the animals, how to interpret their behaviours), while anatomists can teach indigenous people about how structure informs function (i.e., deduce what functions are possible based upon the geometry and position of various tissues). |
| REPORT: How do you think you will put this learning experience into practice in the future? For public engagement/outreach awards how with the materials/knowledge generated by this activity be used in the future?*Minimum number of words between 200-400. Please write in coherent paragraphs.* |
|  We are excited to share data with a group doing aerial drone research. The drone views can help us determine at what point in their approach whales perceive prey patches. We can look for changes in swimming behaviour that might signal detection of a prey patch. The distance at which this occurs can help us understand when and how prey is perceived (i.e., olfaction, gustation, audition, vision, tactile). We have begun a collaboration with the indigenous Māori of New Zealand, working on describing the anatomy of a very rare beaked whale. This project began approximately two weeks after the conference ended. I flew from Australia to New Zealand to perform a dissection of a very rare spade-toothed whale. The Māori participated with local and foreign scientists in a joint effort that promoted collaboration on both scientific and cultural goals. The Māori used the opportunity to train their young men in the skills necessary to harvest culturally important material from a whale, while the anatomists documented the anatomy of this species for the first time. I used the skills I learned to correct my language and make sure I did not imply that we (the scientists) were “allowing” the Māori to perform their cultural practices during the dissection. The dissection did not take priority over cultural needs. Rather, this became a collaborative project in which both cultural values and scientific goals were respected, and tolerance was promoted to ensure both could happen together. We learned to trust each other: that the anatomists could trust the young Māori men to make culturally significant cuts into the whale that would not ruin the dissection, and the Māori could trust that the anatomists would not do anything during the dissection that could be perceived as desecrating the sacredness of the whale ancestor’s body without first gaining the Māori’s permission . For example, we compromised on the need to visualize the brain or decapitate the head. The head, especially the brain, is very sacred and in Māori practice is never separated from the body. We were not permitted to expose the brain, but decapitation was permitted in order to get a CT scan of the head (including the brain), so long as the head was reunited with the body afterwards. The decapitation was performed along with a chanted prayer offered to the spirit of the whale.  |
| Data Protection/GDPR: I consent to the data included in this submission being collected, processed and stored by the Anatomical Society. Answer YES or NO in the Box below |
| YES |
| Graphical Images: If you include graphical images you must obtain consent from people appearing in any photos and confirm that you have consent. A consent statement from you must accompany each report if relevant. A short narrative should accompany the image. Answer N/A not applicable, YES or NO in the box below |
| N/A |
| Copyright: If you submit images you must either own the copyright to the image or have gained the explicit permission of the copyright holder for the image to be submitted as part of the report for upload to the Society’s website, Newsletter, social media and so forth. A copyright statement must accompany each report if relevant. Answer N/A not applicable, YES or NO in the box below |
| N/A |
| SIGNATURE | Joy Spring Reidenberg  | DATE | 09 Jan 2025 |

*If submitted electronically, a type-written name is acceptable in place of a hand-written signature*

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