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April 18, 2023

Dear LSA Executive Committee.

We thank you and the members of the external review committee for engaging with us in this important process of visioning and self-reflection. The internal discussions and preparation of the self-study document helped us grow as a unit, and we appreciate the compliments on it from the committee.

In their summary report, the committee identified two major challenges for EEB: (1) the need for more funding from LSA and/or Rackham to expand the size of the PhD program to match the expanded size of the faculty, and (2) determining how to maximize the impact of the EEB Museums (UM Museum of Zoology (UMMZ) and UM Herbarium (UMH)). Below in our response we parallel the sections in their report, clarifying errors of fact, identifying how we can move forward with their suggested recommendations, and explaining why we do not think some recommendations should be acted upon.

I. Strategic Vision

The committee recommends that "central administration should invest directly in specific curatorial faculty lines to ensure this investment pays dividends." We recognize that this is a substantial investment, but it is also one that could be transformational for the EEB department, as well as strengthening research and education in the biosciences across the University and re-establishing the University as a global leader in biodiversity science. Prior to the merger of the UMMZ and UMH with EEB in 2011, the museums had dedicated curatorial lines (0.5 FTE per faculty curator). To fill these positions, they needed to partner with a tenure-granting unit (nearly always EEB). The committee is recommending a different model in which a set of 1.0 FTEs in EEB would be set aside for faculty with curatorial appointments, potentially capped at 1 per division in the UMMZ and 3 total for the UMH to ensure that no areas of the collections are "orphaned".

The committee conveyed that they proposed this model to alleviate the tension that commonly emerges in departments connected to museum units when curatorial positions are competing for FTEs with other departmental priorities. Indeed, this dynamic has been common in EEB over the last twenty years, both before and after the merger. Current practice in EEB is to advertise for a broad and diverse applicant pool across all of ecology and evolution while including language indicating curatorial opportunities in all job ads and to consider whether any of the top candidates have curatorial potential during the applicant review. The 5 curators hired since 2011 were hired under a variety of mechanisms: one search designed to fill an open curatorial role (birds or fishes), one broader search in evolutionary biology, two through dual career hires (one with support from Program in the Environment), and one through the Collegiate Fellows program. Given that history, there is concern (especially among existing faculty curators and others affiliated with the museums) that this approach will not be sufficient to fill current or future open curator positions with strong candidates in a timely fashion. The most urgent current need is for a Mammalogy curator. A discussion of the full faculty indicated majority support for this

recommendation of university investment directly in curatorial faculty lines, provided that it had little impact on other FTE lines in EEB.

The second recommendation in this section - recognizing curation as a distinct area of faculty scholarship in tenure and promotion evaluations - results from an error of fact. We are not sure how the committee got this impression, but all faculty curators submit a curatorial statement along with their research, teaching, and (when appropriate) service statements as part of their promotion dossier. Accomplishments in this area are specifically assessed for curatorial faculty annually, in their third-year review, and in their TRP/PRP reports. Curatorial actively is also discussed separately from research, teaching, and service by the departmental voting body and (we understand) considered at the college and provost levels. Reading this recommendation did, however, suggest that curatorial activity (which is currently described in an annual statement each curator submits to the Associate Chair for Collections and then shared with the EEB department chair) should be captured more formally as part of our annual faculty review report. We also plan to make curatorial expectations for faculty curators more concrete and transparent by updating a departmental curatorial policy document.

II. Intellectual Profile and III. Faculty

We appreciated that the committee agreed with our self-assessment that "there were no glaring holes ... in the scholarly repertoire" and supported our plan to continue broad searches to identify the best candidates to add to our department at any given time. We agree with the committee that specific areas of strength within EEB will naturally shift over time. We also noted the committee's comment indicating a loss of "robust scholarship in the areas typically associated with museum collections." It is unclear to us exactly what they had in mind; we believe that most of our faculty curators do indeed have robust research programs that intersect with the museum collections in both traditional (e.g., systematics) and novel ways (e.g., global change biology). We also want to clarify that the Green Life Sciences Program the committee identified as an opportunity for synergy is actually our proposed redesign of the current (lowly subscribed) plant biology major. In this section, the committee reiterates their recommendation for a distinct set of curatorial lines already discussed in section I.

IV. Climate and VIII. Justice, Equity, Diversity, and Inclusion

We agree with the committee that the departmental climate has improved in recent years and that our current department chair has been a key part of that; however, we also think that the committee failed to fully appreciate the importance of the groundwork laid by past departmental leaders and the extensive work of the faculty, student, and staff members both on and outside of the EEB diversity committee over the last 20 years. The external review committee correctly identified the museum staff as the group in the department most dissatisfied by current conditions and the key reasons for that, including transportation challenges to and from the RMC, recent University changes in Research Scientist position descriptions and policy, and limited presence of faculty curators at RMC.

We agree that the next chair of EEB should continue to emphasize inclusivity, communication, transparency, and work toward greater workload equity. We also agree that CA Jen Wolff should continue her outstanding management and mentorship of EEB staff. Increased programming for postdoctoral fellows will be a focus of the next department chair, including capitalizing on resources provided by Rackham and the Medical School. This programming should also be helpful for grant writing including for NSF, that now require postdoc mentoring

plans. We will also revisit mentoring for Associate Professors; currently they meet with our promotions and merit committee in their third year in rank to discuss a plan for promotion to Professor, but after discussing the committee's recommendation with current associate professors (only 2 of 4 were able to meet with the committee), we will offer formally assigned mentors on an opt-in basis. More information will also be provided to Associate Professors about mid-career award opportunities, including the NSF MCA grant opportunity, which requires applicants to be at the Associate Professor rank for 3+ years.

V. Undergraduate Program

We believe that the committee made a major oversight in this section by not explicitly recognizing the key role that our Lecturers play in our undergraduate program; we take some responsibility for this, as their meeting with the external review committee was combined with research scientists, reducing their time to talk with the committee specifically about their work or concerns. Beyond this, we agree with the committee that increased transportation to RMC and communication of research opportunities in the EEB museums are needed to engage more students in the enriching experience of doing research with world-class biodiversity collections. We have recently hired a new staff member whose duties include managing the EEB Museums websites and their recently created Newsletter, which will help us keep information (including about research opportunities) transparent and up to date.

Feedback from the undergraduate students that met with the committee was also valuable for helping us prioritize goals for the Program in Biology. Specifically, we will assess the waitlists of current courses to see where the bottlenecks are and where additional course offerings will be most impactful. One area already identified as needing growth is the number of field courses available near campus in Ann Arbor. Such courses are a requirement for our EEB major and are also taken by many other students in the Program in Biology. Currently, many students majoring in EEB fulfill a field course requirement by taking classes at the UM Biological Station (UMBS). To help undergraduate students with their course planning, we are working to provide a schedule of anticipated future courses for undergraduate students (recognizing that it will be challenging to keep accurate). More attention to career guidance is also needed; informal discussions with current EEB majors identified opportunities to team up with PitE and SEAS, who are already doing well in this area. Other majors in Program in Biology will likely require other solutions, including increasing interactions with alumni, hosting panel discussions, and creating a living library of video advice. We are indeed continuing development of a new Quantitative Biology major, as recommended.

Finally, the committee recommended that summer teaching at the UM Biological Station (UMBS) be allowed to substitute for Fall or Winter teaching of tenured and tenure-track faculty. The EEB chair, UMBS director, and Associate Deans for Natural Sciences have discussed this possibility multiple times over the past 3 years without clear resolution. EEB faculty also discussed this possibility at a meeting to help develop this response to the external review committee's report, identifying variation in viewpoints. People in favor of this proposal cite the fantastic environment and immersive education for both faculty and students at the UMBS. They also point out that increasing UM faculty teaching at the biostation strengthens UMBS, many EEB majors take courses at the biostation, and that summer teaching frees up more time during the fall and winter for other types of faculty work, which might be particularly beneficial for Assistant Professors. People opposed are concerned about the impact of such teaching on course offerings during fall and winter in Ann Arbor (and noted the concern raised by

undergraduates that they cannot currently get into the classes they want), uncertainty about how LSA will view teaching at UMBS during promotion evaluations, and UMBS being inaccessible to some students and (secondarily) faculty.

VI. Graduate Education

We agree with the committee that the size of our PhD program needs to grow given the growth in number of faculty and no University increases in funding to EEB for over 20 years, and ask that LSA and/or Rackham provide additional funding to support this growth. We also whole-heartedly endorse their positive views about the bridging Frontiers MS program, including its impacts on students and EEB. We agree with the committee that the metric of success for the Frontiers program should be broadened beyond their transition into a UM PhD program (which might or might not be in the Frontiers students' best interests). Finally, we are grateful that the new Rackham year-round funding policy and supplemental support are allowing us to achieve our goal of ensuring all EEB graduate students receive summer support at the GRSA level, allowing their annual stipends (plus benefits) to meet cost-of-living estimates for Ann Arbor. We had identified this as top priority in our self study document, and are excited to see it achieved so soon.

VII. Postdocs

As described above, a priority for the next EEB chair will be improving the postdoctoral experience, including helping connect them with information and resources including core facilities and grant opportunities. Some of this work is already happening on campus, so the first step will be to review offerings by current groups, identify unique needs of postdocs in EEB specifically, and then work to create new resources and a customized curation of opportunities for postdocs in EEB (e.g., online documentation). Strengthening peer mentoring by building and supporting an EEB postdoc group will also be an important part of this work. Developing a summary of resources available to members of EEB and hosting on our department's internal website, as recommended, is expected to help postdocs as well as others in EEB.

IX. Department Administration, Staff, and Facilities

As noted by the committee, the malfunctioning of built-in equipment in BSB (especially temperature controlled warm and cold rooms) continues to be a problem; two more major failures occurred just this past weekend. We have appreciated assistance from LSA and facilities to recover after such failures, but we'd also like to find stable solutions (including monitored alarms) to prevent material losses in the future. We also agree with the difficulty undergraduate students and others have reaching the BSB administration suite, which includes the Program in Biology office and departmental staff. Improved signage is underway with LSA Facilities in hopes that it improves wayfinding for our community.

The review committee expressed concerns about research space available and conflicts related to space assignments. We agree with the committee about the space constraints and do not expect to gain additional research space from upcoming retirements because these faculty are not currently assigned any research space. We believe that the concerns about space conflicts and the recommendation for a neutral party for space allocation are related to at least one contentious decision by a neighborhood lead, reinforced by the fact that navigating shared lab spaces in the BSB can be challenging. We currently use a two-layer system that first encourages neighborhoods (including designated neighborhood leads) to try to resolve space needs locally, and then refers them to a (presumably neutral) Associate Chair for Research

Space and Facilities who then brings such issues to the attention of the Chair. In the last three years, a small number of concerns reached the Associate Chair or Chair, and these issues were resolved quickly and acceptably (i.e., we have heard of no further problems). Recently, we conducted a research space usage assessment (and agreed to do so every 3-5 years moving forward) that will be used to make adjustments where needed. Finally, we have recently updated our policies for lab and office space allocation in BSB, which were included as an Appendix in the self-study report.

X. Museums

This section of the committee's report offered the most extensive recommendations, and these recommendations have been discussed by the EEB Museums group, including written feedback from 5 out of 10 faculty curators and 5 out of 9 collection managers as well as the Associate Chair for Collections. This feedback was then distributed to the rest of the EEB department and discussed in a full faculty meeting (which is also open to students and staff). Some of the recommendations in this section overlap with recommendations in sections above, but we recap them briefly here to have a summary of museum-related items in one place. As noted above, the committee's statements about curation not being considered separately from research, teaching and service in tenure and promotion cases are incorrect.

Recommendations as prioritized by the faculty curators and curatorial staff:

- Improve transportation between RMC and BSB. We recently submitted a counterproposal to LSA in collaboration with Directors of the UM Paleontology and Anthropology museums suggesting hiring a dedicated shuttle driver for scheduled and on-demand rides, as well as specimen and artifact transportation between Central Campus and the RMC.
- 2. Targeted hires for faculty curators. We ask that LSA ensure one tenure-track curatorial position for each of the six divisions of the UMMZ as well as three tenure-track curatorial positions for collections in the UMH, distinct from other tenure-track faculty positions in EEB. Additional curators could be hired through broad searches in EEB. Although questions were raised about how this might work in the full faculty meeting, this strategy would preserve the long-term viability and accessibility of each collection while maintaining the ability of the Department to do broad searches.
- 3. Create a promotion path for Collection Managers. There is currently only a single title for collection manager staff in the EEB museums. CA Jen Wolff has been discussing this problem with LSA over the last year. The urgency of this issue has been amplified by the loss of our ability to appoint new collection managers with Research Scientist track titles, and by the uncertainty of promotion of existing Assistant Research Scientists.
- 4. Replace the Associate Chair for Collections with an EEB Museums Director. The intention would be for this change to create a direct path for the Director of the EEB Museums to discuss concerns with LSA rather than have the EEB chair serve as an intermediary. Compensation of an EEB Museums Director would ideally also increase to be commensurate with the role, and the EEB chair's time spent managing the museums would hopefully decrease. We do not envision this as a return to separate EEB museums and EEB department, which has presented problems in the past. In the full faculty discussion, some questions were raised about how an EEB Museums director could negotiate directly with LSA if the EEB chair remained responsible for making financial, curriculum, graduate program, and staffing decisions.

- 5. Clarify and better assess faculty curator responsibilities. We agree with the committee's recommendation that curatorial duties need to be more clearly defined and evaluated annually in a more explicit way, although we were unclear what they meant by "bring curators into national norms." We are working to update a former policy document describing curatorial responsibilities.
- 6. *Fundraising*. We would like to work with LSA Advancement to do more directed fundraising for the EEB Museums.

Opinions were more varied among museums' personnel about whether collection managers needed more curatorial guidance, with collection managers seeming to desire more interaction with faculty curators, but not feeling like they need more guidance. This issue is in part related to recommendation (a) above, as the distance between the RMC and BSB has made interactions between Faculty Curators and Collection Managers less frequent. There was also a lack of consensus about the committee's recommendation to increase faculty curator commitment to "at least 25% of employment either through adjusting teaching load or adding summer salary compensation". Currently, faculty curators earn a 25% reduction in teaching in exchange for curatorial activity. Because teaching is 40% of a faculty member's overall workload, this translates to 10% of their overall job responsibilities, which translates to 4 hours/week.

XI. Summary

We thank the external committee for their review, and we thank LSA for the opportunity to respond and open a dialogue on how to best implement the recommendations that will strengthen our Department and the University. To reiterate, our two most pressing challenges are (1) the need for funding from the University to expand the size of the PhD program to match the expanded size of the faculty and (2) determining how to maximize the impact of the EEB Museums. We agree that these are important challenges to solve, and we have been and will continue working on solutions as described in our responses above. We also recognize, as did the review committee, that new resources from the University will be needed to implement the solutions, and we look forward to continuing discussions with LSA on these topics.

Sincerely, Patricia flittlepp

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