

PERSPECTIVE

Juggling parenthood and ornithology: A full lifecycle approach to supporting mothers through the American Ornithological Society

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Submission Date: September 22, 2020; Editorial Acceptance Date: December 11, 2020; Published: March 22, 2021

ABSTRACT

The understanding that motherhood impacts career paths is so pervasive among early-career scientists that some feel they must choose parenthood or a career. The penalties associated with motherhood can contribute to the “leaky pipeline,” which equates to the high attrition rate of women due to social, economical, or temporal factors as they proceed through their career and exacerbates persistent gender gaps at mid- and late-career stages. Here, we review the literature and summarize common challenges faced by ornithologist mothers and nonbinary parents, and we adopt a full lifecycle approach to recommend evidence-based strategies for overcoming those challenges. The American Ornithological Society (AOS) is well positioned to support and celebrate women and nonbinary ornithologists who choose parenthood, and we highlight progress made by the AOS to improve gender diversity, equity, and inclusion within the Society. For example, AOS caregiver grants allow more parents to attend and participate in conferences. We suggest additional initiatives (e.g., elevating role models, hosting mentoring networks, and disseminating best practices) that could further support women who want to become or already are parents while also achieving rewarding careers in ornithology. AOS leadership can take steps to close the gender gap in ornithology and other Science, Technology, Engineering, and Mathematics fields. With a larger, more diverse, and talented community, the Society will be better equipped to achieve its mission: conserving and understanding bird life on earth, enriching ornithology as a profession, and mentoring young professionals.

Keywords: diversity, equity, family-friendly, gender, inclusion, leaky pipeline, parenting, STEM

LAY SUMMARY

- Mothers and nonbinary parents face unique challenges for remaining in ornithology, leading to a “leaky pipeline.”
- The American Ornithological Society’s (AOS) continued support for parents aims to close the gender gap in early-, mid-, and late-career stages.
- We describe how a full lifecycle approach to advancing diversity and equity can enrich the field of ornithology.
- Access to role models, mentors, and resources for field and lab research, together with family-friendly conferences, can alleviate some of these challenges.
- Disseminating best practices to the ornithological community can further position the AOS as a leader.
- The AOS is well positioned to advance the understanding and stewardship of birds on earth while demonstrating a commitment to mentoring young professionals.

Haciendo malabarismos entre maternidad y ornitología: Un enfoque de ciclo de vida completo para apoyar a las madres a través de la Sociedad Ornitológica Americana

RESUMEN

El entendimiento de que la maternidad impacta el desarrollo de la carrera es tan omnipresente entre las científicas al inicio de sus carreras que algunas piensan que deben elegir entre la maternidad y la carrera. Las penalidades asociadas

con la maternidad pueden contribuir a la “tubería con fugas” que equivale a la alta tasa de deserción de las mujeres debido a factores sociales, económicos o temporales a medida que avanzan en sus carreras, y exacerba las brechas de género persistentes en las etapas media y tardía de la carrera. Aquí revisamos la literatura y resumimos los desafíos comunes que enfrentan las madres y las personas no binarias ornitólogas, y adoptamos un enfoque de ciclo de vida completo para recomendar estrategias basadas en evidencias para superar estos desafíos. La Sociedad Ornitológica Americana (AOS por sus siglas en inglés) está bien posicionada para apoyar y celebrar a las mujeres y las personas no binarias ornitólogas que eligen la maternidad, y resaltamos el progreso realizado por la AOS para mejorar la diversidad de género, la equidad y la inclusión adentro de la sociedad. Por ejemplo, las subvenciones para cuidadoras de la AOS permiten que más madres asistan y participen en conferencias. Sugerimos iniciativas adicionales (e.g., elevar modelos a seguir, albergar redes de tutoría y difundir las mejores prácticas) que podrían apoyar aún más a las mujeres que quieren ser madre o que ya lo son para que al mismo tiempo logren carreras gratificantes en ornitología. El liderazgo de la AOS puede tomar medidas para cerrar la brecha de género en ornitología y otros campos de las CTIM. Con una comunidad más grande, diversa y talentosa, la sociedad estará mejor preparada para lograr su misión: conservar y entender la vida de las aves en la tierra, enriquecer la ornitología como profesión y orientar a los y las profesionales jóvenes.

Palabras clave: CTIM, diversidad, equidad, familiar, género, inclusión, maternidad, tubería con fugas

INTRODUCTION

Although women now represent roughly half of all students and professionals in the life sciences (NSB, NSF 2020), many fields still have a “leaky pipeline,” that is, the attrition of women along the path from graduation, securing a permanent position and advancing in a career (Walker 2018). This leaky pipeline, which often hits during critical early-career stages and coincides with peak female fertility (van Anders 2004, Martinez et al. 2007, Kern et al. 2015), is thought to contribute to the underrepresentation of women at advanced career stages of most of the STEM fields (Science, Technology, Engineering, and Mathematics; Williams and Ceci 2012, Walker 2018), including ecology (Salerno et al. 2019) and ornithology (AOS 2020). Multiple factors may drive attrition, including implicit bias (Ceci et al. 2009, Moss-Racusin et al. 2012), lack of role models (Dasgupta and Asgari 2004, Damschen et al. 2005, Sonnett et al. 2007, Farr et al. 2017), insufficient institutional support (Ceci and Williams 2011, Greider 2019), inadequate mentoring (Horner-Devine et al. 2016), and conflicting and unequal demands of work and family (Correll et al. 2007, Adamo 2013, Hughes et al. 2017).

Work–family conflicts are challenging for all members of STEM disciplines, but they disproportionately affect women and others who self-identify as either mothers or primary caregivers. Family responsibilities are second only to retirement as the stated reason why women are unemployed (NSE, NCSES 2017). Data from the Pew Research Center (2013) demonstrate that mothers are much more likely than fathers to reduce their hours or take extended time off from work to care for a child or other family member, and women are twice as likely as men to report that this impeded their career. These patterns not only can be attributed in part to gender disparities in pay (Blau and Kahn 2000) but are also grounded in perceptions of traditional gender roles (Witt 1994).

The disproportionate impact of parenthood on mothers is often exacerbated during times of crisis (e.g., COVID-19

pandemic). During the COVID-19 pandemic, scientists who identified as mothers with young children were much more likely to experience declines in research time, with potentially long-term consequences on productivity and career advancement (Myers et al. 2020). Work–family tradeoffs often begin even before welcoming a child into a home due to opportunity costs. Women and nonbinary individuals who choose to delay childbearing until they have established their career might experience decreased fertility rates, fewer years of potential fertility, and increased health risks (Miller 2011). Yet, those who choose to forge ahead with having children during early career stages might be less competitive on the job market due to the “motherhood bias,” when mothers are perceived as less committed, less dependable, and less competent compared with fathers or women without children (Correll et al. 2007).

Caretakers of dependent children regularly face challenges conducting fieldwork, attending conferences and key meetings, participating in formal and informal networking opportunities, and engaging in other scientific activities outside the office and lab, all of which may slow career advancement (Lynn et al. 2018). Productivity can be hampered by physical, emotional, financial, and logistical demands faced during the processes of conceiving, pregnancy, adoption, foster care, breastfeeding, and arranging childcare (Mason et al. 2013). These competing demands can create a culture of inequity with mothers experiencing greater disadvantages during critical career stages because of biologically and/or socially driven childcare responsibilities (Cech and Blair-Loy 2019). These issues can be compounded for single parents or for dual-career households where both parents are pursuing careers in STEM.

Based on discussions with early-career ornithologists who questioned whether they need to choose between motherhood and careers, we organized a roundtable discussion at the American Ornithological Society (AOS) conference in Anchorage, Alaska (June 2019). This roundtable was attended by more than 30 conference participants and highlighted unique as well as crosscutting experiences of a

panel of 6 ornithologist mothers in various positions and career stages, ranging from parents of toddlers to grandmothers, and including gestational and non-gestational mothers. That said, we recognize that the panelists, who are also the authors of this paper, lack racial and ethnic diversity (i.e. we are all white non-Hispanic/Latinx and identify as women) and thus do not reflect important perspectives from individuals who almost certainly face unique and magnified barriers associated with the intersection of motherhood and other identities (Williams 2014). We also acknowledge other barriers to science careers related to these issues beyond parenthood, although those are beyond the scope of this perspective. We emphasize that “mothers” and “motherhood” can be defined in multiple ways that may include those who adopt, foster, gestate, nurse, and raise babies, children, and teenagers. We also acknowledge that not all mothers are women and that all parents, regardless of gender (and including nonbinary individuals), face challenges balancing professional careers and children. In this piece, we focus on the physical, emotional, and professional barriers faced by mothers who have or plan to have children. Our usage of “mothers” and “motherhood” includes all individuals with children, regardless of gender identity or gender expression, who self-identify as mothers and may/could also extend to those who identify as a nonbinary parent.

The panel further inspired us to review the literature to provide evidence-based strategies for overcoming barriers and to engage the broader AOS community. We summarize here the challenges faced by ornithologist mothers and strategies for achieving success through the full lifecycle of motherhood and career. We borrow terms from population models to creatively illustrate the parallels between the scientists and their study system. Furthermore, this provides a framework for describing how the needs and responsibilities of mothers and scientists change over time. We then highlight several successful initiatives the AOS has launched to increase gender diversity and inclusivity and recommend additional steps that the AOS could take to alleviate the “leaky pipeline.” Finally, we identify institutional practices that would allow universities and other entities to help keep mothers in the pipeline. Our goal is to emphasize that AOS is well positioned to send a message to early-career scientists and set an example to other professional organizations (due to AOS’s strong membership, breadth, and visibility) that it is possible to have a rewarding career while raising children.

From Incubation to Nestlings to Fledglings: What is Good for Mothers is Good for AOS

Professional societies have the potential to play a particularly important role in improving the climate for and retention of women and mothers in STEM fields (Potvin et al. 2018). Professional societies serve scientific communities

through publishing journals, offering grants, and hosting conferences. They help connect scientists across geographically disparate areas, provide opportunities for mentoring and networking, and can increase the visibility and impact of research programs. Professional societies can also promote diverse scientific communities that are productive, innovative (Rice 2011, Díaz-García et al. 2013), and associated with greater job satisfaction (Settles et al. 2006). Retaining and supporting women by reducing the career penalties associated with the motherhood bias are not only a moral and ethical obligation, but they can also benefit the entire scientific community (Correll et al. 2007, Nielsen et al. 2017).

Mothers often have more limited capacity to participate in professional opportunities, such as research collaborations that require travel, conferences, and workshops, compared with fathers (McGuire et al. 2012, Walker 2018). This disadvantage can slow career advancement and, in some instances, presents an exit point from ornithology and other STEM fields, with attrition often occurring within the first 4–7 years of motherhood. In their longitudinal investigation of the impacts of parenthood on career attrition, Cech and Blair-Loy (2019) found that a significantly higher percentage of mothers and fathers with children leave STEM compared with scientists without children (43% vs. 24% for mothers and 23% vs. 16% for fathers). Thus, although both parents faced a marked parenthood penalty, mothers experienced higher attrition rates than fathers. To retain mothers in ornithology, the AOS can continue to play a leadership role in the ornithological and scientific communities by adopting a full lifecycle approach that supports mothers through all stages of their ornithological careers (Figure 1). Such an approach, which recognizes both the unique and overlapping challenges faced by mothers at various stages of motherhood, is critical to addressing the leaky pipeline (Mirick and Wladkowski 2018, Myers et al. 2020). The full lifecycle framework enables the AOS to consider that different policies and practices might be relevant at different career stages—yet, these stages should not be considered in isolation. For example, a scientist with an infant who may need access to lactation rooms will later need family-friendly programming/conference locations when she/they have children or preteens in order to continue attending and participating in professional conferences.

Recognizing Success and Charting a Path Forward

With the initiation of the Diversity and Inclusion Committee in 2016, AOS demonstrated a commitment to creating a more diverse, inclusive, and welcoming society. The AOS recognizes the essential role diverse voices play in advancing science (Nielsen et al. 2017) and identifies opportunities to remove barriers for many groups, including mothers. We acknowledge the steps the AOS has taken

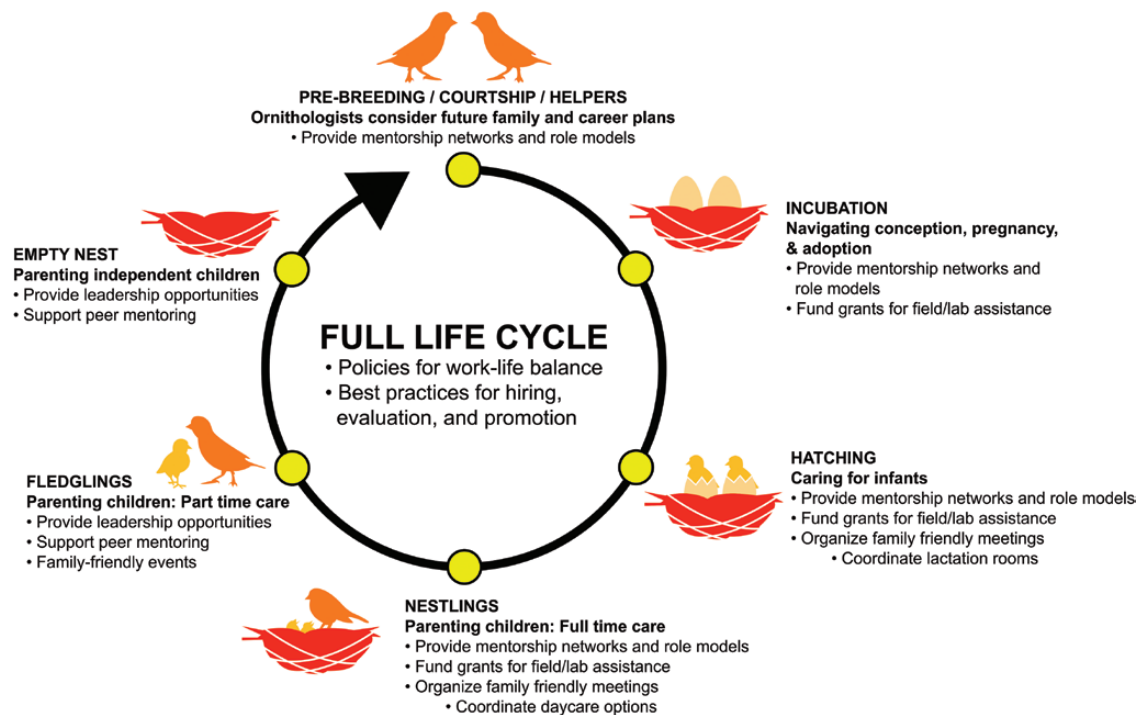


FIGURE 1. We adopt terminology from ornithology and population models and present the type of support the AOS can provide throughout the different stages of motherhood. Many of the support items are relevant throughout the full lifecycle of motherhood, yet the specific actions might change. For example, during the pre-breeding, incubation, and hatching stage, the mother might receive mentorship, whereas, during the fledgling and empty nest stage, mothers provide mentorship. For family-friendly meetings during the hatching stage, the emphasis is on funding caregiver grants and organizing lactation rooms at conferences, while at the fledgling stage, the emphasis is on organizing family-friendly events (e.g., banquets at museums or zoos). The items in the center include opportunities for the AOS to support broader initiatives and other aspects of professional life. All strategies can be applied to other professional societies.

and suggest additional opportunities for the AOS to demonstrate leadership in promoting practices that support motherhood in ornithology. We highlight the importance of role models, mentors, family-friendly conferences, resources for field and lab research, and information about best practices in support of those ornithologists who are or would like to become mothers.

Role models. With the mantra “you can be what you can see,” visible role models can address the unique challenges women and nonbinary individuals face when juggling motherhood and a career (Dasgupta and Asgari 2004). Such role models have the potential to influence perceptions about the challenges and highlights of having children and a career in their chosen scientific field. Professional societies are increasingly aware of, and addressing, systemic issues that have limited participation by women and nonbinary scientists. For example, colloquia and plenary talks in STEM fields have historically been and continue to be dominated by men (Shishkova et al. 2017, Ford et al. 2018, Nittrouer et al. 2018). Societies, including the AOS, are becoming increasingly intentional about seeking gender equity among plenary speakers and other high-profile society roles (Vallence et al. 2019).

Gender balance in prominent roles is important for career advancement, provides visible role models (Farr et al. 2017), and could catalyze more equitable public engagement in bird-related recreational activities, which also remain dominated by men (Cooper and Smith 2010). To raise the profile of role models in ornithology, ornithologist mothers (and partners) could be encouraged to talk about families at meetings and other work events. Such actions could help normalize the concept of motherhood in science (González et al. 2017).

We suggest that the AOS institutionalizes a rotating schedule of roundtables at AOS annual meetings focused on diversity, equity, and inclusion. Each meeting could tackle a different theme, including those relevant to motherhood, such as institutional culture or intersectionality (i.e. considering how a person’s various identities such as gender, race, class, sexuality, and family membership interact rather than act in isolation; Crenshaw 1989). These roundtables would demonstrate the AOS’s commitment to meeting the needs of an increasingly diverse membership that includes an early-career cohort dominated by women as well as others with identities traditionally marginalized in ornithology. Roundtables would also serve to provide

additional opportunities for AOS members to reduce isolation and build community, which are important for career satisfaction and success (Kim et al. 2018).

Mentoring. Mentoring is a key attribute associated with career advancement (Baruch 2013), but scientists who are mothers are less likely to have access to effective mentoring networks within and beyond their institutions (Howe-Walsh et al. 2016). Online networks can fill this gap as well as provide a space for potential mentees who may feel more comfortable speaking with mentors at institutions other than their own (Cossairt et al. 2019). This may be particularly true for mentees with unsupportive or ill-informed advisers or those who lack relevant life experiences (e.g., motherhood) and for early career mentees who feel vulnerable speaking up about sensitive topics at their current or hiring institutions (e.g., navigating maternity leave and tenure, asking about family-friendly practices in an interview). Similar peer mentoring programs have been successful in advancing the careers of women in other disciplines with benefits to both mentees and mentors (e.g., Kalpazidou Schmidt and Faber 2016, Cassese and Holman 2018, Cossairt et al. 2019).

The AOS could play a powerful role in facilitating mentorship of ornithologist mothers at all stages of parenthood (e.g., from pre-pregnancy or adoption through child raising) through an online network and regular discussions at AOS meetings. Specifically, we recommend that the AOS initiate a mentorship program that connects graduate students, postdoctoral fellows, and professionals with early-, mid-, and late-career mothers. This network could provide a space for current mothers to serve as resources and provide advice to future or current mothers in ornithology. As with the proposed roundtables, this mentoring network could be expanded to match mentors and mentees based on multiple aspects of identity and interest.

Conferences. Annual meetings present opportunities for active participation in a professional society, offering members the chance to build skills and their networks by organizing symposia, sharing and presenting research findings, and establishing new collaborations (Calisi et al. 2018). These and other activities contribute to professional development and career advancement. However, attending conferences presents a logistical and financial challenge for parents and other primary caregivers. Thus, for the 2019 annual meeting, the AOS established a subcommittee tasked with improving the family-friendliness of the conference with a goal to remove some of the attendance barriers faced by parents. Guided by the recent Calisi et al. (2018) publication on tackling the “childcare–conference conundrum,” the AOS provided financial, logistical, and professional support for parents and other caregivers. Specifically, AOS awarded 10 caregiver grants that awardees could use in whatever way was most helpful

to them. Funds were used to help defray the cost of travel to the conference for an accompanying adult caregiver and the costs of additional dependent care at home or at the conference. Additional AOS initiatives at recent meetings include securing a lactation room (and ensuring it met standards such as cleanliness, privacy, and providing places to store equipment and milk), promoting and advertising family-friendly events during the meeting (e.g., children welcomed for early morning bird walks), and organizing social media mechanisms (e.g., a Facebook page) for parents to connect with each other and to facilitate shared childcare and meet-ups.

We suggest that future AOS meetings continue to offer these activities and opportunities as well as advance additional initiatives to institutionalize family-friendly policies. To date, many professional societies have focused retention initiatives on parents of young children (i.e. 0–5), which most closely aligns with attrition (Martinez et al. 2007). The AOS could adopt practices that also benefit mothers with older children (e.g., concurrent science/nature camps) as well as members taking care of elderly parents, a duty that often falls on women (Polivka 2018). In addition to welcoming families to attend evening and other social events, we encourage the AOS to continue to hold these events in family-friendly spaces (e.g., museums, zoos, and aviaries). Further, although accommodating individual requests for presentation dates and times is usually not possible, we suggest conference organizers include an option in the registration form to indicate if 2 parents are presenting and then accommodate requests to be placed in sessions that occur at different times. Although we recognize the value of face-to-face meetings, traveling is not an option for some mothers or for scientists with health issues. Providing opportunities for remote access can ensure at the least, the ability for members to communicate their science while providing a virtual space for initiating collaborations. Academic conference cancellations due to the COVID-19 pandemic have led to virtual conference alternatives, demonstrating the logistical feasibility of an all-virtual meeting that can lead to greater participation, while significantly reducing our carbon footprint (Klöwer et al. 2020).

Resources for field and lab research. Field experiences often strengthen a connection with, and clarify concepts about, a scientist’s study system and organism(s) (Fernández Manzanal et al. 1999, Scott et al. 2012). Fieldwork is an opportunity to observe specific behaviors and interactions, which might inspire new research questions, and often leads to increased productivity (e.g., publications, number of grants, and total amount of grant funds; McGuire et al. 2012). However, fieldwork presents additional barriers for mothers. Coordinating childcare for pre-dawn starts

(when birds are most active) is particularly challenging, and the capacity for fieldwork can be limited at stages of parenting due to pregnancy and lactation. Although mothers with career stability might have the means to hire field technicians to conduct fieldwork in their stead, graduate students and postdoctoral scholars often lack the resources to obtain technician support. In addition, personal safety is a salient issue that women and mothers must consider when deciding whether they are comfortable conducting field work alone or with children, which could contribute to the need for hiring field technicians (Wadman 2017). Lab work also poses unique challenges to mothers including exposure to chemicals during pregnancy and experimental procedures with timelines that may be difficult to sync with childcare and maternity leave.

We recognize that a successful career in ornithology does not necessarily require field or lab research. However, the lack of resources for field and lab support might push those seeking motherhood out of the workforce or into ornithological careers with more traditional hours that do not include field or lab research. Such careers should not be the only options for mothers. We recommend the AOS explore opportunities for providing research grants that provide support specifically for early career mothers. These could include (but are not limited to) grants for maternity/parental leave primarily for graduate students and postdoctoral scholars who lack access to other family-friendly policies and research grants for hiring field and lab technicians.

Best practices. The AOS could help catalyze the spread of best practices for the many ways that leaders, allies, supervisors, and institutions can enable mothers to have successful careers in ornithology and other STEM fields. For example, working 80 hours per week should not be regarded as a “badge of commitment” (Correll et al. 2007, Woolston 2017). Changing the culture that embraces this concept of overworking can help level the playing field for caregivers who cannot work outside of standard business and school/daycare hours (i.e. 9–5; Correll et al. 2007, Woolston 2017). Similarly, extending the tenure clock (or equivalent at nonacademic institutions) for parental leave could be the default rather than an “opt-in,” although institutions should also be cognizant that delayed promotion can exacerbate long-term disparities in pay and retirement options. Furthermore, some federal and state agencies require extended leadership trainings that necessitate relocating to another region for several months. This requirement could pose a substantial barrier to career advancement for parents with young children. We recommend that these agencies provide an alternative pathway for leadership training and career advancement during critical periods in the lifecycle of motherhood and career. Although we acknowledge that many ornithological positions require long hours away from home and some career tracks are more competitive than others, we maintain that

it is possible, with institutional support, to achieve a favorable work–life balance.

The AOS could host a visible web-based repository of links to articles and online resources (Table 1) that draw on best practices from ornithology and other related disciplines. For example, AOS could disseminate articles such as the study by Demery and Pipkin (2021) that outlines best practices for creating an inclusive and safe work environment for at-risk field researchers, including women. Since best practices constantly improve based on new evidence, the webpage could be a “living” document and updated to reflect current understanding. Resources that specify best practices could also be promoted at meetings and highlighted during roundtable discussions.

AOS could raise the impact of all the initiatives detailed above by actively engaging with other disciplines to lobby for better institutional norms and policies. Many of the barriers mothers face occur at their home institutions. We recommend that AOS explores opportunities to work with other associations to promote institutional change, particularly at funding agencies, nonprofits, federal and state agencies, and universities. For example, the following nominal changes would make a large difference toward keeping mothers and other primary caregivers in the pipeline: (1) promote hiring practices that acknowledge and address motherhood bias and other forms of implicit bias; (2) allow for flexible work schedules; (3) support spousal hires for permanent positions (e.g., tenure track and agency scientist); (4) in cases when a permanent position is not feasible or desired, institutionalize the practice of establishing positions (e.g., research scientist or research associate) for spousal hires; (5) normalize principal investigator status for people with de facto permanent positions or non-tenure track positions; and (6) increase the number and duration of federal grants and fellowships targeting women and nonbinary individuals and provide no-cost extensions when the grant period gets disrupted by parental leave, with grantee eligibility to apply for additional funds to cover lost salary or for hiring technical support. AOS could also support “early career” initiatives that do not limit the eligibility window by age or number of years post terminal graduate degree, a policy that tends to overlook delays that happen due to parental leave.

CONCLUSION

Juggling motherhood with ornithology is not trivial, but we and many other members of the AOS are living proof that it is possible to have children and have a rewarding career. Although we based this synthesis and set of recommendations on the best available information, we emphasize that critical gaps exist in the literature and in our collective experiences. For example, we expect same-sex parents, trans and nonbinary parents, mothers of color, and those

TABLE 1. Strategic recommendations and resources for supporting mothers in STEM fields such as ornithology.

Strategy	Best practices	Resources
Create an inclusive workplace	Schedule important meetings only during core hours (during childcare/school) Recognize diversity among mothers and provide a range of support options Combat motherhood bias in the workplace Allow flexibility to work part-time or remotely Provide option to “stop the clock” on tenure and promotion for parental leave Establish subsidized on-site daycare Host free and regular workshops on pregnancy and lab safety Build community for new mothers (e.g., support groups, speaker series)	Leventon et al. (2019) Leventon et al. (2019) Ogden (2019) Leventon et al. (2019) Leventon et al. (2019) Hoffman (2019) Hoffman (2019) Hoffman (2019)
Promote role models and mentoring	Normalize motherhood and promote the visibility of mothers in science Encourage role models to discuss challenges and promote strategies to manage work–life balance Establish mentoring networks for mothers	Dasgupta and Asgari (2004) Herrmann et al. (2016) Howe-Walsh et al. (2016)
Host family-friendly conferences	Provide caregiver grants and on-site child care Allow babywearing in conference rooms Select family-friendly venues for social events (e.g., museums, aviaries) and meals Provide quick and easy access to dedicated spaces for breastfeeding, pumping, and changing Establish parent social networks to share information and reduce sense of isolation	Calisi et al. (2018) and Hoffman (2019) Calisi et al. (2018) Calisi et al. (2018) Calisi et al. (2018) Calisi et al. (2018)
Provide resources to keep mothers on a career path	Paid parental leave for gestational and non-gestational parents Grants to hire research technicians when parental duties prevent mothers from doing the work themselves Enact hiring practices that keep families with 2 similar careers together	Lundquist et al. (2012) Springer et al. (2009) Layne et al. (2005) and Jean et al. (2015)

with disabilities to face additional challenges as a result of multiple layers of bias associated with intersectionality ([Williams 2014](#)). There is surprisingly little published literature on the challenges and strategies for overcoming those challenges related to motherhood in ornithology and related fields. As a result, we urge ornithologists to collaborate across disciplines to help fill these knowledge gaps and build a stronger evidence base for a more inclusive field. Recently, [Haines et al. \(2020\)](#) highlighted the importance of diverse voices in ornithology for expanding scientific discoveries, by showing that women are more likely to study female bird song. This and other research underscore the potential shortfalls and research gaps that will persist if we do not plug the leaky pipeline.

We commend the AOS for playing a leadership role in making it easier to succeed as a mother and an ornithologist. We believe the Society can further advance this work by promoting ornithologist mothers as role models, establishing parenthood mentoring networks across institutions, hosting family-friendly meetings, investing in mothers through research grants at critical career stages, highlighting and disseminating best practices to its membership, and advocating for institutional change. Given that many of the barriers and suggestions outlined above are applicable to other field-based disciplines, the AOS can also set an example for other professional societies.

Adopting these initiatives will help close the gender gap at all career stages and strengthen our collective capacity to advance understanding and stewardship of birds on earth.

ACKNOWLEDGMENTS

We thank the organizers of the AOS 2019 meeting in Anchorage, Alaska, for supporting our roundtable on juggling motherhood and ornithology, and we are grateful to the roundtable participants for sharing their valuable experiences and questions. We also thank AOS leadership, including the Diversity and Inclusion committee, for all their efforts to improve diversity, equity, and inclusion within the Society. We thank Lara Roman and Christel Kern who provided comments on an earlier draft of the manuscript. We are also grateful for the suggestions provided by Catherine Lindell, Brian Millsap, and 2 anonymous reviewers, which greatly improved the manuscript. We are grateful to Elizabeth Ignacio and Desiree Narango for help with the figure. The findings and conclusions in this publication are those of the authors and should not be construed to represent any official USDA or U.S. Government determination or policy.

Author contributions: S.B.L. and L.P. conceived the idea and wrote the paper. All other authors substantially edited the paper.

Conflict of interest statement: We declare no conflicts of interest.

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