

EDITORIAL

Founding *Limnology & Oceanography Letters*: The challenges, risks, and rewards of launching a new scientific journal

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Omnia uno tempore erant agenda (All things were to be done at one time) — Julius Caesar on how to deal with the challenges of multiple and complex operations.

—Thorne 2007.

The universe of scholarly publishing includes more than 30,000 peer-reviewed journals in the sciences and humanities (Ware and Mabe 2015), approximately 250 of which cover the aquatic sciences. Establishing a new journal within this large universe poses considerable challenges and risks, but also provides valuable opportunities for scientific societies. The leaders of the Association for the Sciences of Limnology & Oceanography (ASLO) took a risk in 2014 by founding a new journal, *Limnology & Oceanography Letters* (L&O Letters). The first article was published in 2016, and, as of 2020, early signs indicate that this risk is paying off—the journal's debut impact factor was 5.2 (Fig. 1), ranking #1 in Limnology and #2 in Oceanography in 2019. Other indicators of early success include trends of increasing article downloads and citations (Fig. 2), articles receiving exceptional Altmetric Attention Scores (e.g., a score of 968 for Hotaling 2020), and many early-career researchers embracing the journal as both authors and reviewers.

Many new journals fail, so how was L&O Letters conceived and what were the keys to its early success? We address these questions with two purposes, first to share personal retrospectives on the journal's early history, including its conception and launch, from ASLO Executive Director Teresa Curto, past ASLO President John Downing, and Founding Editor-in-Chief Pat Soranno. Second, we use the early L&O Letters story to

highlight ingredients that appear essential for the successful launch of a new journal.

The challenge of a journal launch (T. Curto)

Launching a new journal is a substantial effort and scientific publishing has a legacy of publications that failed because they did not fill a unique niche or void. Most new journals are Open Access and strive for rapid peer review, so they must offer something beyond these expected features and they must develop and succeed quickly to be self-sustaining. Without subscription revenue to help “seed,” fund, and sustain operating expenses, new journals must attract authors who are willing to invest in the article processing charges of open-access publication. Early success also requires authors to take a risk by submitting to a journal that has no Impact Factor for at least 3.5 yr and may never receive one. Established journals receive content at a healthy pace, but start-up journals have an uphill battle that requires significant effort to attract submissions. Like Kevin Costner's *Field of Dreams*, you build it and hope they (authors and readers) will come.

The vision and scope of Limnology & Oceanography Letters

ASLO publishes two other scientific journals, each having distinct aims and scope. *Limnology & Oceanography* (L&O) is ASLO's flagship journal, launched in 1956 to publish articles in marine and freshwater systems. *Limnology & Oceanography Methods* began in 2003 to publish manuscripts whose primary focus is

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methodological. Successful new journals fill a gap in scientific publishing (Soranno 2016), and the vision for *L&O Letters* was: (1) concise articles that target a broad aquatic science audience to foster cross-fertilization among aquatic science subfields for addressing research problems that increasingly require integrative solutions; and (2) an open science platform for ASLO. Here, open science means *open access* (i.e., all articles in *L&O Letters* are freely available upon publication, and *open data* (i.e., all associated data and metadata are published for all articles following FAIR principles; Wilkinson et al. 2016). An important component of open science is that the practices and tools are continually evolving, and *L&O Letters* is committed to also continue to evolve. For example, *L&O Letters* began publishing Data Articles in 2020, creating one of the first aquatic science journals to publish this important article type (Cloern and Soranno 2019). Alongside this vision for the journal is its scope, which states the breadth of the content for the journal as:

“a platform for communication of the most innovative and trend-setting research in the aquatic sciences. Manuscripts should present high impact, cutting-edge results, discoveries or conceptual developments in any area of limnology and oceanography or its integration. Manuscripts will be selected based on their broad interest to the field; the strength of their empirical and conceptual foundations; their insightful, succinct and elegant conclusions; and their potential to advance knowledge in the aquatic sciences. Submissions must be short-format articles that are concise, highly focused analyses, with few display items.”

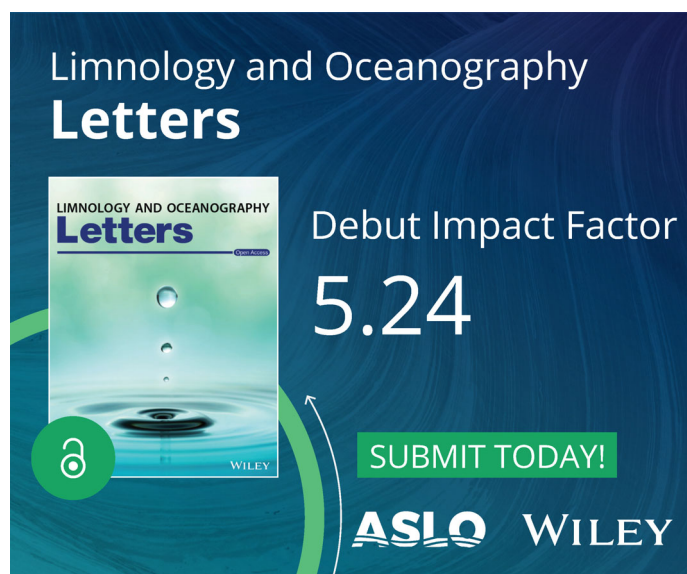


Fig 1. Wiley's announcement of the debut impact factor of *L&O Letters* after it was announced by Clarivate™ in June 2020.

The long and winding road from inception to launch (J. A. Downing)

Most scientific societies depend on publication revenue (Downing 2020), and library subscriptions to *L&O* were slipping in ca. 2010 when the publication environment became increasingly competitive (Downing 2013). As a step to ensure stability in finance and governance, the ASLO Board created an ad hoc committee to produce a forward-looking evaluation of ASLO's publications portfolio and operations. This committee recommended the hiring of an Executive Director (ED) to evaluate publication strategies and for ASLO to seek a commercial publishing partner to strengthen its market share of aquatic science publications. Teresa Curto accepted the ED position and began working with ASLO in February 2014.

Meanwhile, following discussions with the ad hoc committee, I proposed three new journals to the Board of Directors, including *L&O Letters*, at the 2013 ASLO meeting. In my President's report, I wrote: “These could address empty market niches (such as) *L&O Letters* (LOL!) - Publishing fast-breaking, high-profile aquatic science” (These) “should be profit-making enterprises that charge competitive free-access charges to authors.” My proposal was roundly rebuffed as “competing

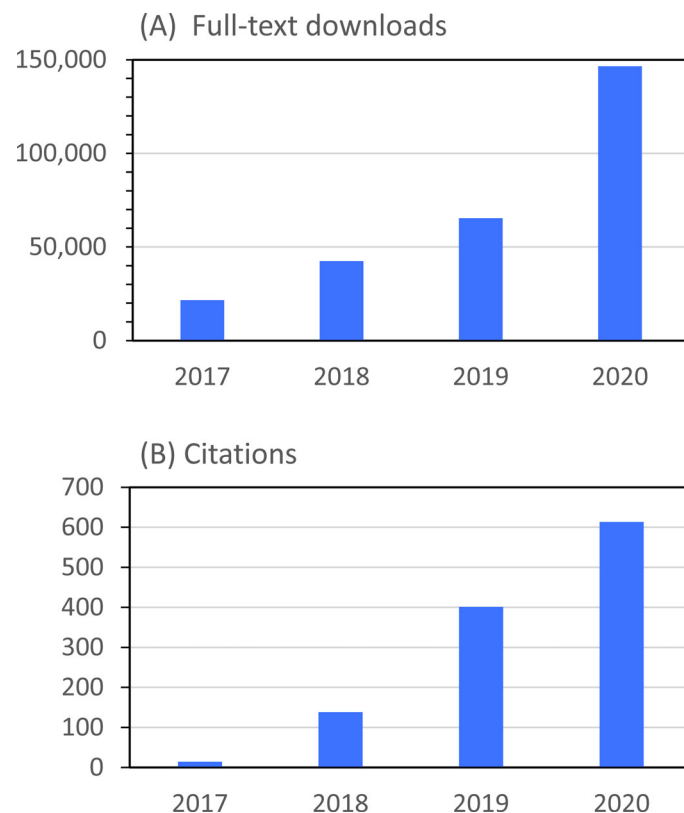


Fig 2. The total number of annual (A) full-text downloads and (B) citations of articles published in *L&O Letters* since its inception. Downloads were provided by Wiley. Downloads for 2020 are through November; citations are from Web of Science as of 12 December 2020.

with ourselves” in a limited market. Undaunted, I proposed these journals a second time in 2014, emphasizing the particular need for a Letters-type journal. With guidance from the new ED and committee members, the Board approved the launch of *L&O Letters* in August 2014. Also, in 2014, the ASLO Publications Committee (PC) interviewed several publishers to partner with to publish its portfolio, including the not-yet launched *L&O Letters*. Wiley, the selected partner, was enthusiastic about *L&O Letters* and made it part of their bid for the ASLO contract.

The scope of *L&O Letters* was formulated by the PC and approved as described above. It is important that scientific societies avoid creating publications that compete with themselves. Prior to ratification of this scope, the PC Chair and I discussed it with the *L&O* Editor-in-Chief to ensure that it did not overlap with his and the Board’s visions for the society’s flagship journal. The PC’s search for an *L&O Letters* Editor-in-Chief began in February 2015 and interviews took place in April. Pat Soranno was recommended enthusiastically by the PC because of her vision to create an author-centric journal that leverages the latest publishing technology and developments to create a new platform for communication among aquatic scientists. The first letters article was published in August 2016 (Saros et al. 2016).

It should be noted that ASLO had previously attempted the creation of new publications: *Limnology and Oceanography Fluids and Environments* (2011–2014); *Limnology and Oceanography eBooks* (2010–2014); and *Limnology and Oceanography eLectures* (2009–2018). All were valiant attempts that required immense energy but were not sustainable. Some lessons from these experiences were that professional publication management (e.g., an Executive Director and a publishing partner) is a necessity for success, that new publication products need to fill large markets that are underserved by current offerings, and that authors need to be given sufficient confidence in the future of the product before entrusting their work.

Upon reflection, 2014 was momentous for ASLO: we built a new governance structure, hired an Executive Director, engaged a professional publishing partner, consolidated our publications portfolio, enabled an expertise-driven PC, and founded a new publication. Julius Caesar, when fighting battles in several places and his armies were challenged on all sides, said that it is the *usus* (experience), the *scientia* (knowledge), and good foresight on the part of leadership that allows the creation of simultaneous solutions (Thorne 2007). *L&O Letters’* first Editor-in-Chief also faced the need to rise to simultaneous multiple challenges.

From launch to sustained operations and growth (P. A. Soranno)

When John Downing described the *L&O Letters* idea to me, I saw a rare opportunity to build a journal from the ground up, with a good chance of success given the strong relationship with Wiley, ASLO’s publishing partner, and the need for the

journal in the aquatic sciences. However, to see this vision through, we needed to build an editorial board from the ground up that would help to develop the culture and practices for the journal, who would serve as ambassadors for the journal to the many aquatic science research communities, and who would set the standards for rigor, impact, and quality that we were striving for. As the founding Editor-in-Chief, I am indebted to those scientists that agreed to join a fledgling journal to help shape and grow it. The journal could not exist without this superb group of individuals donating their time and energy to this effort, many of who are still serving, and one of which, Jim Cloern, who agreed to take the helm while I took leave and who is continuing to strengthen and build the journal.

The early development of the journal was guided by two principles. The first is open science. However, not all aquatic scientists had fully embraced or had experience with open science practices such as data sharing. Therefore, an important early focus was to facilitate data sharing by providing authors resources to lower the barriers of adoption, such as detailed author guidelines for sharing data, an easy-to-use metadata template that ensures their data are well-described, and a short article describing the steps for sharing data (Soranno 2019).

The second principle is related to the culture of science, particularly related to diversity, equity, and inclusion. The scientific enterprise has much work ahead to create a culture that welcomes those who are marginalized or underrepresented, as well as those with less power, such as early-career researchers. These groups are typically not “at the table” making important decisions, and too often their members do not feel like they belong. Although I am not from a marginalized group, as a woman in science I have experienced the feelings of not belonging, of being an outsider or imposter, of not being listened to, and having anger directed at me for actions that, coming from a man in my position, would be applauded. I saw the position of Editor-in-Chief as an opportunity to think strategically about equity and inclusion throughout all decisions needed to build and run a journal. For example, I eliminated the “confidential comments to editors” box for reviewers as a step toward transparency in editorial decisions. I monitored reviewer comments so that inappropriate and personal attacks were not passed on to authors or considered in editorial decisions. I also sought exciting research from a wide range of scholars—early to late career, small to large research institutions, and across the globe. I hope this is an area where the journal can continue to grow and expand its impact. Finally, I developed a program to formally include early-career researchers in the publishing enterprise, the Raelyn Cole Editorial Fellowship (RCEF), which is supported from a fund established by a generous donation from the family of Raelyn Cole, Managing Editor of ASLO’s flagship journal, *Limnology and Oceanography*, from 1965 to 1996. The RCEF was designed to give early-career researchers experiences in publishing and editing earlier rather than later in their careers and to provide them “a seat at the table” in high level discussions of the journal and publishing so that they could contribute their important perspective.

In fact, the development of the RCEF was one of the more rewarding aspects of my time as Editor. Our first two cohorts of RCEF fellows have contributed to the journal and to ASLO in many important ways, including their articles about publishing that target early-career researchers and beyond (Falkenberg and Soranno 2017; Deemer et al. 2020; Hotaling 2020; Poulson-Ellestad et al. 2020), blog posts sharing their experiences, workshops on writing and publishing, contributions during joint ASLO-Wiley strategy meetings, and becoming valued collaborators and colleagues. I am particularly indebted to all our RCEF fellows because there was no model for editorial fellowships when we launched this program, and they were critical in its co-development. Laura Falkenberg deserves special mention as the first fellow who was willing to take on a new, minimally defined opportunity and not only run with it, but set an exceptionally high bar that all subsequent fellows have more than met!

In thinking about how to sustain and grow a new journal after its successful launch, I think *L&O Letters* must not only focus on attracting and publishing the most impactful research written for scientists in all subfields in the aquatic sciences, but it must also continue to be author-centered, focused on inclusion, equity, and diversity, and always be at the cutting-edge of open science. Because we are amid major shifts in scientific publishing, and even science itself, *L&O Letters* will stay strong by adapting to the changing needs of all scientists.

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Conflict of Interest

None declared.

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