

Special issue:

Marine Heterotrophic Protists

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Introduction to the special issue

A Golden Moment to Keep Acta in the Loop

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In 1963 *Acta Protozoologica* was established, and although the journal has undergone editorial and administrative restructuring (Skora and Kuźnicki 2006), it remains unique within the protozoan cannon, abstaining from rebranding and standing steadfast in name and goals. We applaud *Acta's*, refreshingly reactionary stance and celebrate its 50th anniversary. *Acta Protozoologica* is also rare in being one of few international protist-based journals to provide free open-access. Likewise, it enjoys a reputation for presenting high quality publications, with exceptional reproduction of figures and a wide circulation (e.g., the World Catalogue indicates the number of libraries holding protist-related journals for the major markets of the USA, Canada, and the UK: *Journal of Eukaryotic Microbiology* ~ 600;

Acta Protozoologica ~ 400; *Protist* ~ 250; and *European Journal of Protistology* ~ 200).

There has, however, been a trend in this and other protist-oriented journals to focus on taxonomic and phylogenetic issues. In contrast, protistan ecology is often placed in more general journals, a trend that seems unnecessary, as the ubiquitous availability of electronic search tools and the increasing availability of open-access policies have changed the criteria by which we choose where to publish. Therefore, to stimulate readership in *Acta Protozoologica* and encourage ecologists to consider this free (open access), internationally recognised, high-quality journal as a venue for their work, we highlight a major ecological role of protists.

Over the last half century, there has been a clear and increasing interest in pelagic protistan ecology that can easily be marked over the decades. Almost 10 years after the birth of *Acta Protozoologica*, Pomeroy (1974) presented his seminal work “*The ocean's food web, a changing paradigm*”, a paper that raised our appreciation of pelagic protists; cited on the order of 1,000 times, this new view advocated the importance of microorganisms, including the role of protozoa as bacterivores. In doing so, Pomeroy (1974) stimulated an entire field. A decade later, a group of now demi-gods in the

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field published “*The ecological role of water-column microbes in the sea*” (Azam *et al.* 1983), a conceptual paper that eclipsed Pomeroy’s initial work, evidenced by its 3,500 citations, and presented pelagic protozoa as pivotal within the “microbial loop.” The next decade then saw a proliferation of pelagic protozoan publications that, here, we exemplify with a less known, but nevertheless key, work: “*Protozoa and their role in marine processes*” (Reid *et al.* 1991). We select this book for two reasons. First, it is the product of the 1988 NATO-sponsored “*Microzooplankton*” meeting in Plymouth, UK, coordinated by P. C. Reid, C. M. Turley, and P. H. Burkhill; this 2-week “protist-fest” assembled not only the then leading researchers in the field but included many of the present leaders. Our second reason is more personal: this is where we began our collaborating, admittedly at that time it mainly involved consuming several pints of bitter at the *Dolphin* pub, in the depths of Plymouth’s Barbican... but it was a start! It is difficult to choose a single work that exemplifies the myriad of methodological, theoretical, lab- and field-based publications and meetings that followed in the next decade; even die-hard metazoan ecologists began to accept that planktonic protozoa were important. To recognise their contribution to the field, we suggest that “*Significance of predation by protists in aquatic microbial food webs*” by Sherr and Sherr (2002) provides an appropriate decadal landmark. Then, a decade later, brings us to 2013, and this issue.

Here, we sought out both well established and recently emerging experts to contribute. Clearly, this volume is far from exhaustive. Still, we hope that it will be both stimulating and possibly controversial, and, as indicated above, encourage readers to consider *Acta Protozoologica* when submitting their future views on marine planktonic protists.

As a “taster,” we introduce the fields covered in this issue: **Tom Fenchel** discusses how oxygen levels in-

fluence protozoan distribution; **Celia Bulit** examines methods for quantitatively evaluating protozoan distributions; **O. Roger Anderson** surveys marine protistan symbiosis; **Myung Gil Park *et al.*** consider chloroplasts and dinoflagellates; **Alf Skovgaard** reminds us of the importance of marine parasitic protists; **Fernando Gómez** tackles molecular marker, especially in dinoflagellates; **Sabine Agatha** and **Michaela Strüder-Kypke** combine morphology and molecules to investigate ciliate evolution; **Connie Lovejoy** explores Arctic diversity; **John Dolan *et al.*** assess impacts of warming on Arctic protists; **David Patterson** places protists nomenclature (and for that matter data in general) into the Big Data World; and **Keith Davidson** raises challenges associated with adding protists to biogeochemical models. It is with considerable appreciation that we acknowledge these authors. Their works are both informative and inspiring, and at times pleasingly provocative; they reflect the advances of our time and suggest developments for the future.

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