

ESA HISTORICAL RECORDS COMMITTEE

(ESTABLISHED 1944)

NEWSLETTER

*Resources for the history of the Ecological Society of America
and the history of ecology and allied sciences*

No. 13

April 2018

The Ecological State of Mind

In his book, *The Creation: An Appeal to Save Life on Earth*, E. O. Wilson wrote that “to be a naturalist is not just an activity but an honorable state of mind.” A child’s education, Wilson suggests, should allow for exploration of the natural world in an unstructured way, enabling youngsters to discover the world through their own activities. Surely most ecologists get their start in this way, developing a passion for the natural world through intimate contact with it.

But art may also teach us about nature. Artists and writers, poets and story-tellers who interpret nature show us how to think about nature and our relationship to the world. The greatest works show us what it feels like to be in nature. Darwin while on the *Beagle* voyage carried the books of Alexander von Humboldt, whose vivid descriptions conveyed the emotional impact of being in South American forests. Rachel Carson wrote intimately about life on the seashore and in her last book, *Silent Spring*, made us think about what it would feel like to lose part of nature. She herself was inspired by works of fiction, such as Herman Melville’s *Moby Dick*. A more recent addition to the canon of great nature writers is the Scottish naturalist Nan (Anna) Shepherd, whose celebration of the Cairngorms in Scotland, *The Living Mountain*, was published in 1977, thirty

years after she wrote it. Robert Macfarlane, an award-winning nature writer, hailed the book as inspirational for the way it captured what it felt like to be in the mountains.

Such works of art have deeply influenced many ecologists. One might ask how ecologists can draw on such sources in their quest to communicate with the broader public and solve real-world problems. The December 2017 issue of *Frontiers in Ecology and the Environment* is devoted to the concept of “translational ecology” or the need to translate scientific findings into a language understood by end-users and policy makers. Tellingly, the guest editorial by Stephen Jackson, Gregg Garfin, and Carolyn Enquist begins with a quote from Aldo Leopold, whose poetic writings have influenced ecologists by virtue of their ability to capture what it is like to be in nature.

Great works of literature, poetry, and art can be life-changing. If art can be transformative, might it also serve the needs of “translational ecology”? While the special issue does not focus on the arts, ecologists who have been influenced by literary and artistic works may have creative ideas for how the arts can be part of the translational enterprise, helping to communicate not just ecological knowledge, but an ecological state of mind.

Exploring the Archives: The History of Physiological Ecology

2019 is the 50th anniversary of ESA's **Physiological Ecology Section**, created in 1969. Many archival sources enable us to explore the fascinating history of physiological ecology. Here we consider one branch that might otherwise escape attention because it was not always known as "physiological ecology." This was a field within comparative physiology that was known as "expeditionary physiology." Expeditionary physiology meant research on biological adaptation conducted in an animal's natural habitat, rather than in the artificial environment of the laboratory. The goal was to gain a full understanding of adaptations to environmental stressors, and often the focus was on extreme environments, such as the Arctic, Antarctic, or deserts. Studying animals in extreme environments was seen as a good way to discover basic physiological principles because the adaptations were more obvious when animals were pushed to extremes.

Three important expeditionary physiologists of the mid-20th century who would also be recognized as physiological ecologists were Laurence Irving, Per Fredrik Scholander, and Knut Schmidt-Nielsen. All three had links to the famed Danish comparative physiologist and Nobel Laureate, August Krogh. Irving, the eldest of the three, helped to found the Arctic Research Laboratory run by the Navy at Pt. Barrow, Alaska. He served as the lab's first director from 1947-1949. He took special interest in Arctic birds and in this research collaborated with a native natural historian, Simon Paneak. In 1962 he founded the Institute for Arctic Biology at the University of Alaska, Fairbanks. Per ("Pete") Scholander, his son-in-law, came to the U.S. from Norway in 1939, joined the Army Air

Forces during the war, and took faculty positions at Harvard University, Oslo University, and then at Scripps Institution of Oceanography. Scholander had a particular interest in the physiology of marine mammals. Knut Schmidt-Nielsen and his wife Bodil, also a physiologist and the daughter of August Krogh, came to the U.S. at Irving's invitation after the war. In 1952 Knut accepted a faculty position at Duke University, which has a strong tradition in physiological ecology. He and Bodil studied animal adaptations to desert environments

A quick search on **ArchiveGrid** online located archives for all three biologists. Irving's papers, at the University of Alaska, Fairbanks, include manuscripts of lectures, scientific notebooks and journals, and personal and professional correspondence, as well as a movie reel called "The Land That Will Not Heal." Scholander's papers at the University of California San Diego (UCSD) include grant proposals and correspondence documenting the creation and development of the Physiological Research Laboratory at Scripps, as well as the Research Vessel Alpha Helix, which launched in 1966 and carried biologists on expeditions to remote locations around the world. We can also find material in these archives relating to various marine biological stations in the 1960s. UCSD also has a silent motion picture from 1967 documenting the Alpha Helix's Amazon Expedition. Schmidt-Nielsen's papers are at Duke University and include correspondence, research notes, field data, lectures, and grant applications.

Apart from documenting the research of these three important biologists, the archival materials also document the history of physiological ecology and marine biology more broadly, and provide historical context for the creation of ESA's section in 1969.

News from the Historical Records Committee and from ESA's Archives in Athens, Georgia

Obituaries and Resolutions of Respect: Doug Sprugel has been uploading to the website all obituaries and Resolutions of Respect in the *Bulletin* and *Ecology*, carrying on the work of Robert Peet, who began collecting this information three decades ago. All have now been uploaded to the server and are listed on:

<http://esa.org/history/biographies/obituaries-and-resolutions-of-respect/resolutions-of-respect/>

If anyone knows of ESA obituaries he missed, please inform Doug at: sprugel@uw.edu .

There are relatively few obituaries for women ecologists, but the Historical Records Committee is interested in collecting profiles of women ecologists for the website. If anyone would like to contribute a profile, please contact our webmaster Sally White: subversivescience@gmail.com

Oral Histories. We have received the good news from Iva Dimitrova, Oral History Coordinator at the Richard B. Russell Library, University of Georgia, that our oral histories of Robert K. Peet and Steward T. A. Pickett have been processed and have been uploaded to SoundCloud and Google Drive. They can be accessed at the links below:

<https://soundcloud.com/russelllibraryoralhistory/rbrl416esa-022-peet>

<https://soundcloud.com/russelllibraryoralhistory/rbrl416esa-023-pickett>

<https://drive.google.com/open?id=1vGOU4NuZXvJpBj70bCEkQ4leTz0ImCKI>

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