Reading Nature, Observing Science: Examining Material Practices in the Lick Observatory Archives and Kenneth S. Norris Papers

Danielle Crawford (Literature), Alex Moore (HAVC), and Christine Turk (Literature)

2015-2016 Fellows for the Center for Archival Research and Training, UCSC Special Collections

Lick Observatory Archives

The Lick Observatory, founded in 1888, was central to the development of astrophotographic observation. With the Croswell reflector, Lick’s astronomers focused on documenting important features of planetary nebulae. They also travelled on seventeen expeditions between 1890 and 1925 in order to document the solar corona, carrying with them the Schaeberle telescope.

How did the drive toward objectivity and the effort to produce definitive images of celestial objects get entangled with aesthetic ideals?

Was the “objective” image of space shaped by a larger network of amateur astronomers, illustrators, technicians, and craftsmen?

Kenneth S. Norris Papers

Naturalist Kenneth S. Norris (1924-1998) joined the faculty at UCSC in 1972 and was chair of the Environmental Studies Department from 1977-1979. During his time at UCSC, Norris created the Environmental Field Program and the popular Natural History Field Quarter. Norris played a key role in founding the UC Natural Reserve System, and is well-known for his research on marine mammals (dolphins and whales) as well as his use of natural history methodologies.

How do different modes of observation influence natural history and its production of knowledge?

In what ways are natural history knowledge formations, and especially Norris’s dolphin research, shaped by layered practices of observations?

Introduction

This year, UCSC Special Collections has been processing the archives of the Lick Observatory and the papers of Professor Kenneth S. Norris. We look at these collections through the historical construct of the “book of nature”; we are interested in how science has treated nature as a text that can be understood through objective practices of “reading” and which must be carefully reproduced and analyzed through objective modes of representation.

Our research within these archives is informed by an alternate historiography of scientific observation, which considers objectivity as a constructed ideal rather than a natural capacity. As we observe astronomers and naturalists at work in these collections, we can see how objectivity is negotiated by aesthetic considerations and material practices of observation.

This poster displays a selection of objects from these archives. We are currently in the process of curating both a physical exhibit and a digital exhibit for Special Collections, which will open in June.

How do the two archives differently construct the category of “nature”?

What are the similarities and differences in how these scientists and their archives interface with nature?

How does each archive document a response to new technologies used to augment perception—visual, aural, and somatic?

What are the material limitations of these technologies? What are the limitations of human perception?

How were material practices of observation and interdisciplinary approaches central to Norris’s pedagogy?

In what ways did Norris’s teaching philosophy create an immersive, “poetic science” (or a science that incorporates a poetic approach to the natural world) for his students?

Astronomers used 8” x 12” glass plates for astrophotography, even when traveling to view eclipses around the world.

Monograph of Baby Jean, a short-finned pilot whale. The use of both sonographs and audiograms to document the sounds, whales, and clicks of marine mammals was an important part of Norris’ eductional research.

Interview with Dan Warn, a student in the 1972 Natural History Field Quarter, highlighting the interdisciplinary nature of the Field Quarter and its “poetic outlook.”

The Schaeberle Telescope in Indonesia, 1961. Dutch colonial officials provided security, but why provided the knowledge of challenging needed to construct this tower?

Students hiking the Mount Tamalpais trail during the 1974 Natural History Field Quarter. Immersed in each habitat, the students gained first-hand experiences in field observations and research.

Left: Letter from artist Eileen Trimble to Lick director Edward Dunbar, 1893, regarding the advantages of illus-
Left: Aerial behavior log taken from shipyard at Kealakekua Bay off of the Island of Hawaii, recording the number of different aerial behaviors exhibited by dolphins within ten minute periods of observation and one minute blocks (1996).
Right: Norris field notes about a school of dolphins spotted in the waters off of Noyo Headlands after a corresponding sketch (1974).

Left: Letter between Lick Observatory director and the Barnes-Croswell Company in Chicago (1917), one of the photographic companies whose actions reproducible the glass positives credited Lick astronomers.

Letters between Lick Observatory director and the Barnes-Croswell Company in Chicago, 1917.

Right: Image of Orion nebula created with the Croswell telescope (area white) and a drawing of the nebula by Trumpler (1899).

Left: Letter from artist Eileen Trimble to Lick director Edward Dunbar, 1893, regarding the advantages of illustr-
Left: Elizabeth Campbell, wife of director W.W. Campbell, sitting on a turtle during the expedition to Flute Island (1928).
Right: Norris students on the ground, observing mushrooms at UCSC as part of the Environmental Field Program (area 1977).