

JENS W. KNUDSEN, PHD (1928 – 1994)

Biographical summary by Sandra I. Berríos Torres, MD (for Rossano Studios) and Jacob Egge, PhD (Associate Professor, Department of Biology, Pacific Lutheran University). This summary is part of the supplemental catalog compiled for Pacific Northwest artist Joseph Rossano's *Vanity* exhibition, on view September 27-November 3, 2017, at the University Gallery, Pacific Lutheran University.

BA, Biological Sciences - Pacific Lutheran University (PLU), 1952

MS, Biological Sciences – University of Southern California (USC), 1954

PhD, Marine Biology – USC, 1957



Figure 1. Jens W. Knudsen circa 1966-1967 Photo courtesy of PLU Department of Biology archives

Personal

Jens W. Knudsen married Winona (PLU '54) with whom he had two sons, Jens William Knudsen (deceased, 1972) and William Lars Knudsen.

Honors

Distinguished Alumnus Award, PLU, 1975

Regency Professorship, PLU, 1973

Visiting Distinguished Professor, Danforth Foundation, 1973

Outstanding Alumnus Award, PLU, 1969

E. Harris Harbison Award for Distinguished Teaching, Danforth Foundation, 1968

Blue Key Outstanding Faculty Award, 1967

Positions

Department Chair, Biology, PLU

Professor, PLU, 1966

Co-founder and Director, "Summer Field School in Biology" (Ecology) at Holden Village, PLU, 1962-1963

Associate Professor, PLU, 1961

Assistant Professor, PLU, 1958

Visiting Lecturer in Biological Oceanography, USC, 1957-59
Instructor, PLU, 1957
Teaching Assistant, USC, 1957
Curator of Entomology, Allan Hancock Foundation, USC 1952-55

Artist

Knudsen was recognized as a “versatile part-time self-taught artist (Anonymous 1985a).”¹ While his original aspirations were to become a commercial artist, he actually came to PLU as a student in Theology, to prepare for the ministry. Knudsen felt that a calling involved “giving up something” and he wanted to give up art. It was during his undergraduate years that he was compelled to become a biologist. As a biologist, Knudsen applied his artistic talent to illustrate his lectures and publications, to educate his students and his community, and to garner financial support for PLU.

Dioramas and Biological Displays

Knudsen consulted with multiple outside groups, including the Burke Museum, on display construction. He spent thousands of hours preparing displays and constructed dioramas for the Point Defiance Aquarium. In 1982, the displays were removed to be make room for a gift shop and Knudsen stored them at Ivy Hall (PLU). “Washington’s Surf-swept Rocky Coast – Cape Flattery at Low Tide” and “The Forest Magnified 20 Times - An Ant’s View – Wow!” are two dioramas on display at the Rieke Science Center.

William O. Rieke Science Center, PLU

In 1985, Knudsen unveiled the 30 X 24 ft. mahogany piece he designed, carved and donated to grace the Reike Science Center’s donor recognition wall. In addition to the names of all major donors, the piece features “...major symbolic campus landmarks relating to PLU’s history and mission, including the old and new science buildings, clock tower, Eastvoid auditorium, and Harstad Hall (Anonymous 1985b).”

Religious Art

Knudsen’s carvings of religious art grace several northwest Lutheran Churches, including the carving of the Madonna and Child in the Trinity Lutheran Church narthex. He constructed many of these carvings in return for donations to PLU.

Scientist

Knudsen worked on multiple, diverse, interesting projects. As one of the Burton Ostenson Museum’s “Notable Collectors” he procured multiple vertebrate and invertebrate specimens for the collection. Some of the species he studied included: Pseduoscorpions (Pseudoscorpionidae), Pebble Crabs (Xanthidae), Spider Crabs (*Pugettia product*), King Crabs (*Paralithodes camtschatica*), Barnacles (*Lepas facicularis*) attached to Jellyfish (*Velella*), and Carrion Beetles (*Necrodes surinamensis*). Three new subspecies of Tiger Beetles were described by Knudsen: *Cicindela fulgida williamlarsi* (Knudsen 1985) in honor of his son William Lars, *C. f. winonae* (Knudsen 1985) in honor of his wife Winona (with whom he collected the beetle and butterfly specimens on display), and *C. f. rumppi* (Knudsen 1985), in honor of Norman L. Rump, a

cicindelophile. *Cincindela fulgida williamlarsi* and *C.f. winonae* are now considered synonyms of *C. f. pseudouillistoni* Horn (Bousquet 2012).

Knudsen took part in multiple notable expeditions in North and Central America including to Scripps Visciano Bay, Baja California (1953); the California Fish and Game Expedition, Gulf of California (1955); the Doheney Expedition, Tres Marias Islands, Mexico (1956); USC Field Party, Alaska (1957-58), and the Institution for Tropical Biology, Costa Rica (1961). Beginning in 1965, with funding from the National Science Foundation and the Atomic Energy Commission, Knudsen embarked on a multiphase study of ecosystem recovery on the Eniwetok Atoll in the Marshall Islands (Pearson and Knudsen 1967, Garth et al. 1987).

Between 1948 and 1958, a total of 43 nuclear tests were performed on Enewetak, including testing of the first hydrogen bomb on November 1, 1952, on the Eniwetok Atoll. During his annual visits (1965,66,67,68,69,71,72), Knudsen and his students focused studying the Enewetak Atoll birds (Pearson 196) and crabs (Garth et al. 1987). The latter project's three phases included: (1) an evaluation of the relationship between crabs and coral hosts, (2) an evaluation of crab ecology (110 species), and (3) the publication of a detailed monograph of over 200 species of crabs discovered in the Marshall Islands (>35 had not been previously recorded there) (Garth et al.1987). Multiple coral specimens collected in Eniwetok by Knudsen are also part of the Burton T. Ostenson Museum collection.

Teacher

As a teacher, Knudsen worked “to instill in his students an appreciation of mankind, his history, culture and struggles – within the context of his relationships with his environment, his fellow humans and his Creator (Peterson 1982).” “Biology and Modern Man,” the humanities biology course he instituted for non-majors, was often cited as being a “legendary” course, with over 300 students enrolled annually. The course represented an innovative approach, a more holistic view of man, integrating both the physical (environment) and mental (creativity, emotions) planes. “The course, as [did] Knudsen’s life and other professional endeavors, reflect[ed] his wonder and respect for the sacredness, beauty and fragility of life. ‘In nature, the only right life offers one is death. All the rest is privilege. How exciting it is to discover the privilege to truly live (Peterson 1982).’” In addition, Knudsen taught Ecology, Oceanography, Parasitology, Entomology, Vertebrate Natural History, Invertebrate Natural History, Independent studies in Medical Illustration and Biological Techniques. For the latter course, he wrote the book “Biological Techniques, Collecting, Preserving, and Illustrating Plants and Animals” (Knudsen 1966). In 1985, after 28 years of teaching at PLU, he retired with plans to pursue his interests in the arts, children’s literature, and poetry (Anonymous 1985b).

Mentor

As a teacher, Knudsen offered his students much more than an opportunity to learn; he provided inspiration and invaluable mentoring. Teaching, to him, was “The thrill of launching careers and thus becoming a part of agelessness (Anonymous. 1973).” He became a part of agelessness when W. Ronald Heyer, a student of Knudsen’s, named Knudsen’s Frog or Knudsen’s thin-toed

Frog, in his honor: *Leptodactylus knudseni* (Heyer 1972). Below, several leading scientists share their memories of Knudsen and express their gratitude for his mentorship.

“Jens Knudsen played a pivotal role in my life. He came to campus (then PLC [Pacific Lutheran College]) in the fall of 1957 as I entered my senior year. I took two of his courses, both with much field work, and spent a lot of time with him. He was young, dynamic, exciting and dedicated to both art and science. He illustrated his lectures with drawings on the board, often executed in seconds, using both hands. His Entomology course was especially important, and when he saw that I was as excited by the salamanders we found as by the insects, he urged me to apply to work with Jay Savage, who became my adviser at the University of Southern California. These memories of Jens, now 60 years old, remain vivid. He was an inspiring person (personal communication September 15, 2017).”

David B. Wake, PhD

Distinguished Alumnus Award, 1977, PLU

Director, AmphibiaWeb Project

Professor of the Graduate School in Integrative Biology

Curator, Museum of Vertebrate Zoology University of California, Berkeley

“I was fortunate to have Dr. Jens Knudsen as mentor during my undergraduate years at Pacific Lutheran University. He encouraged me to broaden my aspirations. Field work, teaching, natural history illustrations were experiences he provided that formed a base for my scientific career (personal communication September 19, 2017).”

“My undergraduate biology professor, Jens Knudsen, was instrumental in changing my career aspirations. Field trips for his classes took us to mountains, deserts, tide pools. Lab exercises taught us illustration. I became a teaching assistant and ran undergraduate anatomy and biology labs. Jens’ mentoring sparked my interest in zoology and provided a sound base for continuing my studies in graduate school.” “I wanted to work with tiger beetles and pursued the entomology program at Washington State University. I found out that the tiger beetle expert at WSU would be retiring, and Jens suggested I try the graduate program at the University of Southern California where he had completed his work. I applied and was accepted to study fishes under Jay M. Savage (Heyer and Heyer 2016).”

On August 3, 1970, W. Ronald Heyer and Keith A. Berven collected a new frog species in Ecuador. In the description Heyer states: “The new species [*Leptodactylus knudseni*] is named for Dr. Jens W. Knudsen who was the most important influence in my decision to be a professional biologist and who continues to encourage my professional efforts ([Heyer 1972](#)).”

W. Ronald Heyer, PhD

Distinguished Alumnus Award, 1984, PLU

Research Zoologist, Amphibians and Reptiles Staff

Smithsonian National Museum of Natural History

"Despite being on a science track for most of my life, where would the study of science take me? Certainly, as one walks down the path of life, there are many forks in the trail. But which path to take? In high school, I enjoyed everything scientific. In college, at Pacific Lutheran University (PLU), I bounced around between majors in mathematics, psychology, biology and chemistry, eventually graduating with a dual major in biology and chemistry. Because of the mentorship of Prof. Jens Knudsen at PLU and the class in Invertebrate Zoology that he taught, I knew that oceanography was my destiny (Anonymous NatGeo)."

William Peterson, PhD (1942-2017)

Oceanographer, Marine Biologist, Ecologist, and Climate Scientist
Senior Scientist, National Oceanic and Atmospheric Association, Hatfield Marine
Science Center

Select Scientific Publications

- Garth J. S., J. Haig, and J. W. Knudsen. 1987. [Crustacea Decapoda \(Brachyura and Anomura\) of Enewetak Atoll](#). In D. M. Devaney, E. S. Reese, B. L. Burch, & P. Helfrich (Eds.). *The Natural History of Enewetak Atoll. Volume II, Biogeography and Systematics, DOE/EV/00703-TI-Vol. 2 (DE87006111)*. U.S. Department of Energy, Office of Scientific and Technical Information, Oak Ridge, Tennessee. Pp. 253-261. Available at: <https://decapoda.nhm.org/pdfs/27800/27800.pdf> Accessed on September 17, 2017.
- Knudsen, J. W. 1985. A brief review of *Cicindela fulgida* with descriptions of three new subspecies from New Mexico (Coleoptera: Cicindelidae). *Entomological News* 96: 177–187.
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- Knudsen, J. W. 1960. The courtship and egg mass of *Ambystoma gracile* and *Ambystoma macrodactylum*. *Copeia* (1): 44-46
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- Knudsen, J. W. 1960. Aspects of the ecology of the California Pebble Crabs (Crustacea: Xanthidae). *Ecological Monographs*. 30(2):165-185.
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- Knudsen, J. W. 1959. Shell formation and growth of the California Xanthid Crabs. *Ecology*. 40(1):113-115.
- Knudsen, J. W. 1959. Autotomy and regeneration in the California Xanthidae, the pebble crabs (Crustacea: Decapoda). Wasman J. *Biol* 17:95-104.
- Knudsen, J. W. 1958. Life Cycle Studies of the Brachyura of Western North America, I. General culture methods of the life cycle of *Lophopanopeus leucomanus leucomanus* (Lockington). *Bulletin of the Southern California Academy of Sciences* 57(1): 51-59.
- Knudsen, J. W. 1957. The act of molting in the California Xanthidae, the pebble crabs. *Bulletin of the Southern California Academy of Sciences*. 56(3):133-142.
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Books

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