Eric S. Long

Professor of Biology

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Education

- **Ph.D., Ecology,** The Pennsylvania State University, Dec. 2005
  Dissertation: Landscape and demographic effects on dispersal of white-tailed deer in Pennsylvania
- **M.S., Biology**, The University of North Dakota. Dec. 2001.
  Thesis: Response of mountain lions to a changing prey base in California
- **B.S., Biology**, Wheaton College (IL). Dec. 1998. S*umma cum laude*

Academic Appointments and Service

- **Professor,** Department of Biology, Seattle Pacific University, Seattle, WA. 2006 – present.
  - Ranks Held
    - Professor of Biology: Fall 2016 - present
    - Associate Professor of Biology: Fall 2011 – Summer 2016
    - Assistant Professor of Biology: Fall 2006 (hire date) – Summer 2011
  - Teaching Responsibilities (* = current, F = field course)
    - BIO 1100: Animal Biology (Non-majors)
    - BIO 1859: Biology Cornerstone Seminar
    - BIO 2102: Intro. Biol: Animal Diversity
    - BIO 2103: Intro. Biol: Ecology & Evolution*
    - BIO 3302: Evol. Ecology: Galapagos* (F)
    - BIO 3303: Coral Reef Ecology: Belize* (F)
    - BIO 3310: Ecology*
    - BIO 3432: Vertebrate Diversity*
    - BIO 3835: Theological Ecology* (Sch Wint 2023)
    - BIO 3899: Sci. Literature: Climate Change Ecol.*
    - BIO 4360: Biostatistics*
    - BIO 4825: Forest Ecology* (F)
    - BIO 4835: Conservation Biology* (F)
    - BIO 4899: Natural Sciences Capstone*
  - Administrative Responsibilities & University Governance
    - SPU Faculty Athletics Representative to the NCAA: 2015 – present
    - SPU Intercollegiate Athletics Committee
      - Chair: 2013 – 2015
      - Member: 2008 – present
    - SPU Institutional Animal Care & Use Committee
      - Appointed as an inaugural member to develop the Committee: 2007-13
  - Committees and Taskforces
    - SPU Cross-Campus Interview Committee (2021 – Present)
    - SPU General Education Taskforce: 2019-2020
    - SPU Biology Dept. "BioCORE Scholars Program" subcommittee: 2014-2015

        - Co-developed a program to better serve underrepresented minorities seeking to major in biology.
        - Awarded Office of the Provost Academic Innovation Fund for 2015 - 2016 ($22,042)
    - SPU Search Committees (selected)
        - Associated Athletics Director for Compliance & Student Success (2022)
        - Resident Manager, Blakely Island (2022)
        - Guest Services Coordinator, Blakely Island (2022)
        - Athletics Director (2016)
        - Director of Campus Writing (2015)
        - University Librarian (2011)
- Campus-wide addresses
    - SPU Weter Lecture: scheduled 2022. *Priest of a Groaning Creation: Natural Theology and the Earthly Temple*
    - SPU Ivy Cutting address: 2017
    - SPU Baccalaureate address: 2009
- Other University Service
    - Interim resident manager, Blakely Island Field Station: 2022
    - SPU Campus-wide Interview Member
        - Women's Gymnastics Coach: 2019
        - Women's Rowing Coach: 2016
        - Men's Basketball Coach: 2016
        - Dean of Students: 2015
        - Women's Soccer Coach: 2015
        - Athletic Director: 2009
    - SPU New Student Advising: 2009 – 2015
    - Faculty advisor, ASSP-recognized SPU Biology Club: 2010 - 2020
    - Faculty advisor, ASSP-recognized SPU Organic Gardening Club: 2011 - 2022
    - Prepared a video lecture for use in all UCOR 3000 courses surveying scientific evidence for evolution
    - Guest lectures/presentations
        - Creation Care (USEM 1000, TRE 3930, THEO 3260, THEO 6030, Day of Common Learning 2015, 2018)
        - Writing as an Academic (2017 Day of Common Learning, Spring 2018 UScholars)
        - Faith and Evolution (UCOR 3000, 2009 Darwin Symposium)
        - Wildlife Research (BIO 4899, PSY 4101, 2010 Food for Thought, 2013 Biol. Dept. at WWU)
    - Co-developed new B.S. Ecology major (2007)
    - Co-developed new Ecotheology minor (2019)
    - Developed new Honors/WE course: Theological Ecology (scheduled 2022)

- **Adjunct Professor,** Department of Biology, Bucknell University, Lewisburg, PA. 2005.
    - Teaching Responsibilities: BIO 341: Organic Evolution

PEER-REVIEWED PUBLICATIONS (*UNDERGRADUATE CO-AUTHOR)

- **Long, E.S.,** D.R. Diefenbach, C.L. Lutz, B.D. Wallingford, and C.S. Rosenberry. 2021. Risky movements? Natal dispersal does not decrease survival of a large herbivore**.** *Ecology and Evolution* 11:2731-2740.
- Brezynski, E.M. V., **E.S. Long,** M.J. Allen, and D.W. Wood. 2021. The BioCORE Scholars Program improves academic attainment of underrepresented biology undergraduate minority students. *Journal of Best Practices in Health Professions Diversity: Research, Education and Policy* 14:2.
- Diefenbach, D.R., G.L. Alt, B.D. Wallingford, C.S. Rosenberry, and **E.S. Long.** 2019. Effect of male age structure on reproduction in white-tailed deer. *Journal of Wildlife Management* 83:1368-1376.
- **Long, E.S.**, K.L. Courtney*, J.C. Lippert*, C.M. Wall-Scheffler. 2019. Reduced body size of insular black-tailed deer is caused by slowed development. *Oecologia* 189:675-685.
- Wallingford, B.D., D.R. Diefenbach, **E.S. Long**, C.S. Rosenberry, G.L Alt. 2017. Biological and social outcomes of antler point restriction harvest regulations for white-tailed deer. *Wildlife Monographs* 196:1-26.
- Buderman, F.E., D.R. Diefenbach, C.R. Rosenberry, B.D. Wallingford, and **E.S. Long**. 2014. Effect of hunter selectivity on harvest rates of radio collared white-tailed deer in Pennsylvania. *Journal of Wildlife Management* 78:1456-1465.
- Jongejans, E., O. Skarpaas, M.J. Ferrari, **E.S. Long**, J.T. Dauer, C.M. Schwarz, E.S.J. Rauschert, R. Jabbour, D.A. Mortensen, S.A. Isard, D.A. Lieb, Z. Sezen, A.G. Hulting, K. Shea. 2014. A unifying gravity framework for dispersal. *Theoretical Ecology* 8:207-223.
- **Long, E.S.**, T.C. Jacobsen*, B.J. Nelson*, and K.M.M. Steensma*. 2013. Conditional daily and seasonal movement strategies of male Columbia black-tailed deer (Odocoileus hemionus columbianus). *Canadian Journal of Zoology* 91:679-688.
- **Long, E.S.**, D.R. Diefenbach, C.S. Rosenberry, and B.D. Wallingford. 2010. Influence of roads, rivers, and mountains on dispersal of white-tailed deer. *Journal of Wildlife Management* 74:1242-1249.
- Rosenberry, C.S., **Long, E.S.**, Hassel, H.M.*, Buonaccorsi, V.P., Diefenbach, D.R., and Wallingford, B.D. 2009. Relatedness of white-tailed deer capture groups. *Journal of Wildlife Management* 73:357-361.
- **Long, E.S.**, D.R. Diefenbach, C.S. Rosenberry, and B.D. Wallingford. 2008. Multiple proximate and ultimate causes of natal dispersal in white-tailed deer. *Behavioral Ecology* 19:1235-1242.
- Ross, R. **E.S. Long**, D. Dropkin. 2008. Response of macroinvertebrate communities to remediation-simulating conditions in Pennsylvania streams influenced by acid mine drainage. *Environmental Monitoring and Assessment* 145:323-338.
- Diefenbach, D.R. **E.S. Long**, C.S. Rosenberry, B.D. Wallingford, D.R. Smith. 2008. Modeling distribution of dispersal distances in male white-tailed deer. *Journal of Wildlife Management* 72:1296-1303.
- **Long, E.S.**, R.A. Sweitzer, D.R. Diefenbach, and M. Ben-David. 2005. Controlling for anthropogenically induced atmospheric variation in stable carbon isotope studies. *Oecologia* 146:148-156.
- **Long, E.S.**, D.R. Diefenbach, C.S. Rosenberry, B.D. Wallingford, and M.D. Grund. 2005. Landscape structure influences dispersal distance of white-tailed deer. *Journal of Mammalogy* 86:623-629.
- **Long, E.S.**, D.A. Fecske, R.A. Sweitzer, J.A. Jenks, B.M. Pierce, and V.C. Bleich. 2003. Efficacy of photographic scent stations to detect mountain lions. *Western North American Naturalist* 63:529-532.

- **Long, E.S.** and R.A. Sweitzer. 2001. Museum collection records of mountain lions in California. *California Fish and Game* 87:153-167.

ACADEMIC PEER-REVIEWED PRESENTATIONS (SELECTED)

(SINCE 2007; *UNDERGRADUATE CO-AUTHOR)

- Ferrer, R.; **E. Long**; B. Craft. Effects of predator odors on deer-fir interactions in a predator-free environment. Society for Integrative and Comparative Biology. Austin, TX. January, 2023
- Daman S.*, E. Tham*, R. Ferrer, and **E. Long.** Forest succession induces long-term decline in an island population of black-tailed deer. 29th Annual Conference of The Wildlife Society. Spokane, WA. Nov 2022.
- Brezynski, E., **E. Long**, M. J. Allen and D. Wood. The BioCORE Scholars Program: Improving Persistence and Academic Performance of Underrepresented Students in Biology. J. Best Pract. Health Prof. Divers. Spring 2019, 12(1) 108-109 (abstract of conference proceedings at NAMME: National Association of Medical Minority Educators).
- Sevigny, J.P.*, J.R. Palaganas*, K.M. Peterson*, A.C. Wilken*, B.B. Craft, and **E.S. Long.** A taxonomy-based meta-analysis of risk-sensitive foraging models from 1950 to present. 56th Annual Conference of the Animal Behavior Society. Chicago, IL. Jul 2019.
- **Long, E.S.**, L.A. Arnold*, R.L. Pedersen*, Z.M. Wilson*, and C.M. Wall-Scheffler. Age and sex structure of a high density, island population of black-tailed deer. 22nd Annual Conference of The Wildlife Society. Alberta, CA. Oct 2015.
- **Long, E.S.**, T.C. Jacobsen*, B.J. Nelson*, K.M. Steensma.* Using generalized additive mixed models to evaluate seasonal and daily movement strategies of black-tailed deer. 20th Annual Conference of The Wildlife Society. Milwaukee, WI. Oct 2013.
- Wallingford, B.D., D.R. Diefenbach, C.S. Rosenberry, and **E.S. Long**. Pennsylvania antler point restrictions: more and bigger bucks, but hunter opinions remain unchanged. 19th Annual Conference of The Wildlife Society. Portland, OR. Oct 2012.
- **Long, E.S.**, S.K. Irvin*, S.M. Robinson*, and L.D. Davies*. Comparison of line-transect distance sampling and mark-resight with automatic cameras for estimating density of an island population of black-tailed deer. 19th Annual Conference of The Wildlife Society. Portland, OR. Oct 2012.
- Reaves, D.L.*, B.B. Craft, and **E.S. Long**. Patch discrimination in black-tailed deer. Annual Meeting of the American Psychological Association, Orlando, FL. 2012.
- **Long, E.S.**, T.C. Jacobsen*, B.J. Nelson*, K.M. Steensma*, and D.A. Congdon*. Seasonal movement patterns of male black-tailed deer. 18th Annual Conference of The Wildlife Society. Waikoloa, HI. Nov 2011.
- Taylor, K.* and **E.S. Long**. Home range estimates for a high density population of Columbian black-tailed deer on Blakely Island. 16th Annual Conference of The Wildlife Society. Monterey, CA. Sep 2009.
- **Long, E.S.**, L. Davies,* K. Taylor,* S. Irvin,* and M. Friesen.* Estimating population size and movement patterns of black-tailed deer on Blakely Island, WA. Western States and Provinces Deer and Elk Workshop, Spokane, WA. Apr 2009. (Published abstract.)
- **Long, E.S.**, D.R. Diefenbach, C.S. Rosenberry, and B.D. Wallingford. Landscape interactions of dispersing white-tailed deer: pathways, directionality, and barriers. The Wildlife Society. Miami, FL. Nov 2008.
- **Long, E.S.**, D.R. Diefenbach, C.S. Rosenberry, and B.D. Wallingford. Multiple proximate and ultimate causes of dispersal in juvenile male white-tailed deer. Ecological Society of America. San Jose, CA. Aug 2007.

- Skarpass, O., J.T. Dauer, C.M. Schwarz, E.J. Rauschert, E. Jongejans, R. Jabbour, D.A. Mortensen, S.A. Isard, D.A. Lieb, Z. Sezen, A.G. Hulting, M.J. Ferrari, K. Shea, and **E.S. Long**. Dispersal: towards unification across organisms and research traditions. Ecological Society of America. San Jose, CA. Aug 2007.

COLLABORATION WITH STUDENT PRINCIPAL INVESTIGATORS

(SINCE 2011; *UNDERGRADUATE STUDENT)

- From 2006 - 2022, supervised 67 undergraduate research students, resulting in 55 undergraduate lead-authored or co-authored presentations. Selected presentations below (2012 – 2022), not including national presentations listed above:
  - G. Barthelmess, M. Brown, L. Hellums, M. Lerwick, and E. Lopit. Survivorship of Columbian black-tailed deer on a predator-free island. Oral Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2022.
  - Daman, S., G. Barthelmess, **E. Long.** Survivorship of Columbian black-tailed deer on a predator-free island. Oral Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2021.
  - Geiman, O., **E. Long.** Disproportionate brain mass reduction in an insular, dwarfed population of black-tailed deer. Oral Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2021.
  - Kano, C., I. San Roman, **E. Long,** C.M. Wall-Scheffler. Survivorship of harvested male *Odocoileus hemionus columbianus* on Blakely Island, WA. Poster presentation at the Murdock Conference for Undergraduate Research. Vancouver, WA, 2019.
  - Hemenway, J., U. Kim, **E. Long,** C.M. Wall-Scheffler. Survivorship of Columbian black-tailed deer (*Odocoileus hemionus columbianus*) on Blakely Island, Washington. Poster presentation at the Murdock Conference for Undergraduate Research. Vancouver, WA, 2019.
  - Nackviseth C., S. Bark, **E. Long,** J. Tenlen. Assessing juvenile survivorship of an island deer population using DNA from bone. Poster presentation at the Murdock Conference for Undergraduate Research. Vancouver, WA, 2019.
  - Bark, S., C. Nackviseth, **E.S. Long**, and J. Tenlen. Assessing genetic diversity in an island deer population. Oral Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2019.
  - Kano, C., I. San Roman, **E.S. Long**, and C.M. Wall-Scheffler. Survivorship of male harvested Columbian black-tailed deer (*Odocoileus hemionus columbianus*) on Blakely Island, WA. Oral Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2019. (Best oral presentation awardee).
  - Hemenway, J., U. Kim, **E.S. Long**, and C.M. Wall-Scheffler. Survivorship of Columbian black-tailed deer (*Odocoileus hemionus columbianus*) on Blakely Island, Washington. Oral Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2019.
  - Ballard, H., H. Thompson, **E.S. Long**, and C.M. Wall-Scheffler. Survivorship of Harvested Female *Odocoileus hemionus columbianus*. Poster Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2019.

- Butler, L., S. Simpson, and **E.S. Long.** Fluctuating Asymmetry in Colombia Black Tailed Deer. Poster Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2019.
- Kim, U., J. Hemenway, **E.S. Long**, and C.M. Wall-Scheffler. Survivorship of Columbian Black-tailed Deer on Blakely Island, Washington. Poster presentation at the Murdock Conference for Undergraduate Research. Vancouver, WA, 2018.
- Zieg, A., A. Cole, J. Hemenway, U. Kim, **E.S. Long**, and C.M. Wall-Scheffler. Survivorship of Columbian black-tailed deer (Odocoileus hemionus columbianus) on Blakely Island, WA. Oral Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2018.
- Zieg, A.K., R.R. Jones, **E.S. Long**, and C.M. Wall-Scheffler. Survivorship of Columbian Black-tailed Deer on Blakely Island, Washington. Poster presentation at the Murdock Conference for Undergraduate Research. Spokane, WA, 2017.
- Courtney, K.*, T. Hildebrand*, **E.S. Long,** and C.M. Wall-Scheffler. Why are deer on islands so small? Oral Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2017.
- Zieg, A.*, R. Jones*, **E.S. Long**, and C.M. Wall-Scheffler. Survivorship of Columbian black-tailed deer on Blakely Island, WA. Oral Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2017.
- Courtney, K.*, T. Hildebrand*, J. Lippert*, B. McMillen*, **E.S. Long**, and C.M. Wall-Scheffler. Blakely Island deer, the island rule, and developmental heterochrony. Oral presentation at the Murdock Conference for Undergraduate Research. Spokane, WA, 2016.
- McMillen, B.*, J. Lippert*, T. Hildebrand*, K. Courtney*, **E.S. Long,** and C.M. Wall-Scheffler. The island rule and developmental heterochrony in black-tailed deer on Blakely Island. Oral Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2016.
- McAuley, J.*, E. Orando*, **E.S. Long.** Second growth forest and transmission powerline rights-of-way: variation in avian populations based on habitat differences on Blakely Island, WA. Oral Presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2016.
- McAuley, J.*, E. Orando*, **E.S. Long.** Old growth forest vs. transmission powerline rights-of-way: variation in avian populations based on habitat differences. Poster at Murdock Conference for Undergraduate Research. Vancouver, WA, 2015.
- Hasegawa, M.*, A. Kerlee*, B. Ferguson*, **E.S. Long**, and C.M. Wall-Scheffler. Molar parameters for age approximation of black-tailed deer (*Odocoileus hemionus columbianus*) on Blakely Island, WA. Poster presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2015.
- Arnold, L.A.*, **E.S. Long**, and C.M. Wall-Scheffler. Survivorship and developmental timing of black-tailed deer on Blakely Island. Oral presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2015.
- Brenneman, J.D.*, A.N. Cutting*, A.D. Zeiders*, and **E.S. Long**. Estimating Population Density of Columbia Black-tailed Deer on Blakely Island, Washington. Poster at Murdock Conference for Undergraduate Research. Clark College, Vancouver, WA, 2014.

- Arnold, L.C.*, R.L. Pedersen*, J. Herrman*, D. Spargo*, **E.S. Long**, and C. Wall-Scheffler. Age structure and survivorship of black-tailed deer on Blakely Island, WA. Poster presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2014.
- Spargo, D.*, J. Herrman*, **E.S. Long**, and C. Wall-Scheffler. Exploring developmental rate change in an island population of black-tailed deer. Poster presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2014.
- Brenneman, J.D.*, A.D. Zeiders*, and **E.S. Long**. Estimating density of Columbia black-tailed deer (*Odocoileus hemionus columbianus*) on Blakely Island, WA. Oral presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2014.
- Reyes, J.S.*, R.D. Cadorette*, and **E.S. Long**. Developing tooth wear metrics to detect developmental rate change in an insular population of black-tailed deer. Poster presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2013.
- Brenneman, J.D.*, A.D. Zeiders*, and **E.S. Long**. Estimating density of Columbia black-tailed deer (*Odocoileus hemionus columbianus*) on Blakely Island, WA. Poster at Murdock Conference for Undergraduate Research. University of Puget Sound, WA, 2013.
- Robinson, S.M.* and **E.S. Long**. Black-tailed deer (*Odocoileus hemionus columbianus*) population density estimation on Blakely Island, WA, using mark-resight with radio-telemetry. Poster presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2012.
- Rush, A.*, C. Calvin*, and **E.S. Long**. Using cementum annuli to age black-tailed deer from Blakely Island. Poster presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2012.
- Borcherding, J.C.*, **E.S. Long**, and C.R. Bishop. Ectoparasite loads of black-tailed deer on Blakely Island. Poster presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2012.
- Williams, C.*, B.B. Craft, and **E.S. Long**. Risk-sensitivity in foraging of black-tailed deer. Poster presentation at Erickson Conference for Undergraduate Research. Seattle Pacific University, Seattle, WA, 2012.

❑ From 2006 - 2012, advised or co-advised 20 SPU research students, resulting in 24 presentations, including
- 15 presentations at the SPU Erickson Conference for Undergraduate Research (2008 – 2011).
- 7 presentations at the Murdock Conference for Undergraduate Research (2007 – 2009).
- 1 presentation (4 student co-authors) at the Western States and Provinces Deer and Elk Workshop (2009).
- 1 presentation at the National Conference of the Wildlife Society (2009).

PEER REVIEW EXPERIENCE

❑ *Ursus (2005), Behavioral Ecology & Sociobiology (2006), Canadian Journal of Zoology (2009), Journal of Animal Ecology (2010), Journal of Mammalogy (2011, 2014), Landscape Ecology (2011, 2013, 2015), Wildlife Diseases (2012), PLoS One (2013), Wildlife Biology (2014, 2016, 2019), Journal of Visualized Experiments (2016), Biological Invasions (2017), Marchetti et al.* Ecology *1st ed (2018), Mammalia (2018), Wildlife Research (2021), Biological Journal of the Linnean Society (2021), Journal of Wildlife Management (2018x2, 2020, 2022), Global Ecology & Conservation (2022)*

Grants and Awards

- ❑ Seattle Pacific University Winifred E. Weter Faculty Award Lecture for Meritorious Scholarship (Selected 2020, delivered 2022).
  - **E.S. Long.** *Priests of a Fallen Creation: The Temple, Natural Theology, and Ecology in Dialogue*
- ❑ Seattle Pacific University Teacher of the Year Award (ASSP), 2008-2009
- ❑ Grants
  - Seattle Pacific University Faculty Research Grant, 2022-23 ($4413)
    - R.P Ferrer, **E.S Long**, B.B. Craft. *Effects of Predator Odors on Deer-Fir Interactions in a Predator-Free Environment.*
  - Seattle Pacific University Innovation Grant, 2017-18 ($2300)
    - M. Langford, J.J. Johnson Leese, and **E.S. Long**. Development of an interdisciplinary minor in Ecotheology.
  - Seattle Pacific University Academic Renewal Grant, 2018 ($3398)
    - **E.S. Long** Development of a new non-majors biology course emphasizing the intersection of ecology and theology
  - Seattle Pacific University Faculty Research Grant, 2015-16 ($3333)
    - J. Tenlen & **E.S. Long**. *Are Blakely Island deer inbred? Genetic diversity in an isolated population of deer.*
  - Seattle Pacific University Faculty Research Grant, 2014-15 ($4,607)
    - C.M. Wall-Scheffler & **E.S Long**. *Why so small? Heterochrony as evidence for a life history shift among black-tailed deer on Blakely Island.*
  - Seattle Pacific University Faculty Research Grant, 2011-12 ($4,611)
    - **E.S. Long** & B. Craft. *Top-down effects on community structure in a heavily browsed forest ecosystem*
  - Seattle Pacific University Faculty Research Grant, 2008 ($4,612)
    - **E.S. Long**. *Movements and activity patterns of black-tailed deer in a high-density population on Blakely Island*

Professional Association

- ❑ The Wildlife Society