

Phyllis Baudoin Griffard, PhD
Curriculum Vitae
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Contact

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Education

PhD in Curriculum and Instruction, minor in Biochemistry, Louisiana State University, Baton Rouge, Louisiana, USA. December, 1999
MS in Medicinal Chemistry and Pharmacognosy (doctoral candidate), Purdue University, West Lafayette, Indiana, USA. December, 1987
Honors BS in Zoology, minor in Chemistry. University of Southwestern Louisiana, USA, May, 1983

Professional Positions and Employment

2020-present Science Education Services
2017-2020 Master Instructor of Biology, University of Louisiana-Lafayette
2015-2017 Instructor of Biology, University of Louisiana-Lafayette
2014-present Freelance Rewriter, Forte Science Communications, Tokyo, Japan
2014 Adjunct Instructor, University of St. Thomas, Houston, TX
2012-2014 Lecturer in Biology, University of Houston-Downtown, Houston, TX
2008-2012 Senior Lecturer in Biology, Pre-medical Education, Weill Cornell Medical College in Qatar, Doha, Qatar
2007-2008 Freelance Rewriter, Forte Science Communications, Tokyo, Japan
2005-2008 Adjunct Instructor of General Biology and Introductory Biology, Northwestern State University of Louisiana, Natchitoches, LA, USA
2004-2006 Supervisor of Distance Learning, CSPC International School, Hui Yang, China
2003-2005 Visiting scholar, Huizhou University, Huizhou, Guangdong, China
2002-2003 Director, UHD Scholars Academy, and Lecturer in Biology, University of Houston-Downtown, Houston, TX, USA
2000-2002 Program Coordinator and Evaluator of the UHD Scholars Academy and Lecturer in Biology, University of Houston-Downtown, Houston, TX, USA
1999-2000 Interim Director of the Science Learning Center and Lecturer in Biology, University of Houston-Downtown, Houston, TX, USA
1996 Adjunct Instructor of Biology (Cell, Molecular and Developmental Biology), Loyola University, New Orleans, LA, USA
1995-1999 Graduate Fellow, Louisiana State University
1990-1994 Instructor of Biology (tenure-track) and General Biology Coordinator, Xavier University of Louisiana, New Orleans, LA, USA
1989 Volunteer Intern, World Neighbors (A Non-Governmental International Development organization), Mali, West Africa
1988-1989 Research Associate, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center, New Orleans, LA
1985-1987 Graduate Research Assistant and Fellow, Purdue University
1983-1985 Graduate Teaching Assistant, Purdue University

Professional Memberships

1995-2012 National Association for Research in Science Teaching
2010-2014 National Science Teachers Association (College Science Section)

- 2010-2012 American Association for the Advancement of Science
 2016-2017 Louisiana Academy of Sciences

Honors and Awards

- 2015 Accepted to the Fulbright Specialist Program roster for Biology Education
 2014 Winner of Outstanding Lecturer Award, University of Houston-Downtown
 2012 Pre-medical Science Teaching Award, Weill Cornell Medical College-Qatar
 2009 Judy Moody-Stuart Literary Prize
 1999 Inducted into Phi Kappa Phi National Honor Fraternity as life member
 1995-1999 Board of Regents Graduate Fellowship, Louisiana State University
 1985-1987 David Ross Doctoral Fellowship, Purdue University

Articles in peer-reviewed journals

1. **Griffard, P. B.** and K. Golkowska (2013). "Early exposure to research: Outcomes of the ASTER certification program." Journal of College Science Teaching **43**(1): 36-43.
2. **Griffard, P.B.**, T. Mosleh, and S. Kubba (2013). "Developing the Inner Scientist: Book Club Participation and The Nature of Science." CBE Life Sci Education **12**(1): 80-91.
3. **Griffard, P. B.** and J. H. Wandersee (2001). "The Two-tier Instrument on Photosynthesis: What does it diagnose?" International Journal of Science Education **23**(10): 1039-1052.
4. **Griffard, P. B.** and J. H. Wandersee (1999). "Challenges to meaningful learning among African-American females at an urban science high school." International Journal of Science Education **21**(6): 611-632.
5. Morre', D. J., K. E. Creek, G. R. Matyas, N. Minnifield, I. Sun, **P. Baudoin**, D. M. Morre', and F. Crane (1984). "Free-flow electrophoresis for subfractionation of rat liver golgi apparatus." BioTechniques **2** (4): 224-233.

Book chapters

1. **Griffard, P.B.** (2013) *Deconstruction and Decoding of Complex Process Diagrams used in University Biology*, in Multiple Representations in Biological Education. D. Treagust and C.-Y. Tsui, eds. New York: Springer.
2. Wandersee, J. H. and **P.B. Griffard** (2002). *The History of Chemistry: Potential and Actual Contributions to Chemical Education*, in Chemical Education: Towards Research-Based Practice. Norwell MA: Kluwer.
3. **Griffard, P. B.** (1999). Gaps in college biology students' understanding of photosynthesis: Implications for human constructivist learning theory and college classroom practice, UMI Publication #9960057.
4. Ashendel, C. L., **P. A. Baudoin** and P. M. Minor (1988). *Protein phosphorylation in signal transduction and tumor promotion*. pp. 331-342 in Tumor Promoters: Biological Approaches for Mechanistic Studies and Assay Systems. R. Langenbach, E. Elmore and J. C. Barrett. New York, Raven Press.

Abstracts

1. Qureshi, S and **P. B. Griffard** (2012). Process Oriented Guided Inquiry Learning (POGIL) in Foundation Chemistry: A progress report. 14th Annual Science and Math Educators Conference. Beirut, Lebanon.
2. Treagust, D., C.-Y. Tsui, A. Yarden, **P. Griffard**, K. L. Halverson, K. Shoenborn, R. Schwartz, S. L. Wong, B. C. Buckley, K. Niebert (2012). How Best Can Multiple External Representations be Harnessed for Improving Learning in Biology? National Association for Research in Science Teaching, Indianapolis, Indiana.
3. **Griffard, P. B.** (2011). Interpreting Complex Process Diagrams in Biology. Gordon Research Conference on Visualization in Science and Education, Smithfield, RI.
4. **Griffard, P. B.**, T. Mosleh and S. Kubba (2011). Developing the Inner Scientist: Book Club Participation and Epistemological Growth. National Study of Education in Undergraduate Science, Tuscaloosa, AL.

5. **Griffard, P. B.** (2010). Decoding Visual Narratives Used in University Biology. National Association for Research in Science Teaching, Philadelphia, PA, USA.
6. **Griffard, P. B.** and J. H. Wandersee (2003). A Typology of Gaps in College Biology Students' Understanding of Photosynthesis. In a symposium entitled Methods and Myths about Conducting Research in Botany Education. Botanical Society of America. Mobile, AL.
7. **Griffard, P. B.** and J. H. Wandersee (2001). A qualitative look at a quantitative approach to alternative conceptions research: The two-tier instrument. National Association for Research in Science Teaching, St. Louis, MO.
8. **Griffard, P. B.** and A. D. Adams (2001). An analysis of the attributes of alternative conceptions in physics and biology: Similarities, differences, and implications for conceptual change. National Association for Research in Science Teaching, St. Louis, MO.
9. **Griffard, P. B.** and J. H. Wandersee (2000). Evidence of college students' graphic decoding gaps during use of a computer simulation of photosynthesis. Mathematics/Science Education and Technology, San Diego, CA.
10. **Griffard, P. B.** and J. H. Wandersee (2000). Toward a comprehensive typology of gaps in college biology students' understanding of photosynthesis. National Association for Research in Science Teaching, New Orleans, LA.
11. **Griffard, P. B.** and J. H. Wandersee (1999). Exposing gaps in college biochemistry understanding using new cognitive probes. National Association for Research in Science Teaching, Boston, MA.
12. **Griffard, P. B.** and J. H. Wandersee (1998). Challenges to meaningful learning among African-American females at an urban science high school. National Association for Research in Science Teaching, San Diego, CA.
13. Ashendel, C. L., P. L. Minor, **P. A. Baudoin** and C. Molina (1987). "Chromatographic resolution of altered forms of protein kinase C." Fed. Proc. 46: 2067.
14. Minor, P. L., **P. A. Baudoin** and C. L. Ashendel (1987). "Separation and functional characterization of protein kinase C isozymes from rat brain and other tissues." Proc. Am. Assoc. Cancer Res. 28: 174.
15. Reeves, J. A., **P. A. Baudoin**, C. L. Ashendel and A. Kraft (1987). "Bryostatin is less potent than phorbol esters in inducing non-adherent growth of mouse epidermal cells." Proc. Am. Assoc. Cancer Res. 28: 175.
16. **Baudoin, P. A.** and C. L. Ashendel (1987). "Down-regulation of protein kinase C in mouse cells and tissues." Fed. Proc. 46: 2067.
17. **Baudoin, P. A.** and C. L. Ashendel (1986). "Down-regulation of the phorbol ester receptor in mouse lymphocytes and during promotion of C3H 10T1/2 fibroblasts." Proc. Am. Assoc. Cancer Res. 27: 145.

Other presentations

1. **Griffard, P.B.** (2016). DeafBlind Cajuns. Science on the Bayou.
2. Dement, G., **Griffard, P. B.**, Kang, Y., Sadana, R. (2014). Team-based Learning in Freshman Biology. University of Houston-Downtown Technology in Learning Conference.
3. Klingler, L., Pilgrim, B., Rush, A., Sadana, R. and **Griffard, P. B.** (2014). Characterization of Bachome and others. University of Houston-Downtown High Impact Practices Showcase.
4. **Griffard, P. B.** (2012). Higher Science Education: Semiotics and Epistemology. Pre-medical Faculty Seminar Series, Weill Cornell Medical College in Qatar.
5. **Griffard, P. B.** (2010). How science knowledge grows: Rich immersion in science non-fiction literature in Cornell's Biology lecture course. English Teaching Excellence for Qatar Conference.
6. **Griffard, P. B.** (2010). Developing the Inner Scientist: The Pre-medical Book Club. Education City Liberal Arts/Social Sciences Forum.
7. **Griffard, P. B.** (2009) Understanding the First Year Premedical Experience (and Improving It). Poster at 2nd Annual Action Research Conference, Qatar University.
8. **Griffard, P. B.** (2009). I See What You're Saying: Graphic Decoding in the Life Sciences. Education City Liberal Arts/Social Sciences Research Forum. March 30, 2009.

9. **Griffard, P. B.**, S. Slough, P. Morris-Smith and L. G. Spears (2002). Standards-based science content courses for preservice elementary teachers: A progress report. National Science Teachers Association. San Diego, CA.
10. **Griffard, P. B.** (2000). Making biology INTERACTIVE: A "bodies-on" approach. Fall 2000 meeting of the Metropolitan Area Teachers of Science, Houston TX.
11. **Griffard, P. B.** and J. H. Wandersee (1996). Inquiring professors want to know: What do college students misunderstand about photosynthesis? National Association of Biology Teachers, Charlotte, NC.
12. **Griffard, P. B.** and J. H. Wandersee (1995). Students as molecules: Role-playing biochemical processes enhances learning in a college biology lecture. National Association of Biology Teachers, Phoenix, AZ.
13. **Baudoin, P. A.** and C. L. Ashendel (1986). Regulation of protein kinase C (PKC) and its relation to multistage *in vitro* promotion. PUB Research Conference, Crawfordsville, IN.
14. **Baudoin, P. A.** and C. L. Ashendel (1986). Translocation and down-regulation of protein kinase C and correlation with transformation *in vitro*. Tissue Culture Association Midwestern Branch spring meeting, Chicago.

Other articles

1. **Griffard, P. G.** (2020). "DeafBlind Cajuns." National Center for Case Study Teaching in Science. <https://sciencecases.lib.buffalo.edu/files/deafblind.pdf>
2. **Griffard, P. B.** (2017). "Cajun Strong: Community and Science Bolster Lives of Deaf-Blind in Acadiana." Louisiana Cultural Vistas, June issue, 38-42.
3. **Griffard, P. B.** (2010) Dissecting Motivation: The Will-Skill-Thrill Profile. Journal of College Science Teaching **40** (1), pages 10-11.
4. **Griffard, P. B.** (2008). The Expat Meme Machine. Destinations, June, pages 30-33. (Winner of Judy Moody-Stuart Literary Prize)
5. **Griffard, P. B.** (2006). Hands-on Science Without Borders: Thinking Globally and Teaching Locally. Connect **19** (4): 4-6.
6. **Griffard, P. B.**, S. Flanagan and J. H. Wandersee (1999). "The mystery of the disappearing nucleus: How student-made flipbooks can model dynamic biological processes." Adaptation **20** (2): 4-7.
7. **Griffard, P. B.** and J. H. Wandersee (1998). "Teaching about scientist Barbara McClintock: Bridging molecular and organismal biology." Adaptation **19**(2): 8-11.

Intramural Professional Activities

Teaching

- 2015-2020 University of Louisiana-Lafayette, Fundamentals of Biology I and II lecture (face-to-face and online) and lab, Internship supervision, Coordination of BIOL 2 lab.
- 2014 University of St. Thomas, Introduction to Cell and Molecular Biology lecture, Introduction to Biology Practicum (lab)
- 2012-2014 - University of Houston-Downtown
 - General Biology 2 lecture and lab for majors
 - HHMI-supported SEA-PHAGES Biology I and II labs (*In situ* and *In silico*)
 - Anatomy and Physiology lecture and lab for pre-health majors.
 - Served on summer committee to develop course materials for Team-based learning for Biology I lecture reform.
 - Implemented High Impact Experiences into all courses since January 2013 (Service Learning Projects, Authentic Research, Team-based Learning and Applications)
- 2008-2012 - Weill Cornell Medical College in Qatar
 - Primary instructor for Premedical Biology lecture
 - Guest instructor in the Foundation Program Biology course
 - Co-instructor of Human Genetics (2011)
 - Co-instructor of Communications for Biomedical Research Interns: Grant-writing module (2011-2012)

Co-instructor of ENGL104: Reading and Writing in the Sciences (2009)
 MCAT review for Biological Sciences and Verbal Reasoning (2010-2012)

2005-2008 - Northwestern State University of Louisiana
 Adjunct instructor and developer of online course in Introductory Biology
 Adjunct online instructor of General Biology lecture and lab for psychology majors

2005-2006 Huizhou University
 Primary instructor for required Special English course for Biology majors.

1998-2002 - University of Houston-Downtown
 Regular instructor of Introductory Biology I and II lectures and labs (first year course for science majors)
 Developer and primary instructor of Life Science Studies (a standards-based biology course for preservice elementary school teachers)
 Developer and primary instructor for Special Topics in Life Science (an intensive biology course for elementary school teachers in a Masters Program)
 Developer and Instructor of UHD's College Success Program for freshmen in the UHD Scholars Academy
 Occasional instructor in service courses for non-science majors

1996 Louisiana State University
 Co-instructor of graduate course in Concept Mapping, Department of Curriculum and Instruction

1996 Loyola University of New Orleans
 Adjunct instructor of sole section of Cell, Molecular and Developmental Biology, a required 2nd year course for Biology majors

1990-1994 Xavier University of Louisiana
 Course coordinator and instructor of multiple sections of General Biology I lecture and lab
 Developer and primary instructor of Cell Biology lecture and laboratory
 Developer and primary instructor of Research Techniques module on Immunodetection Strategies
 Occasional instructor in biology seminar and non-science major lectures and labs

Service

2017-2020 Faculty Advisor to the Biology Society, a UL-Lafayette student organization
 2016 Faculty advisor to Manos Unidas, a UL-Lafayette student organization
 2013-2014 University of Houston-Downtown
 Service Learning and Community Engagement committee

2008-2012 Weill Cornell Medical College in Qatar
 Elected pre-medical faculty representative to Dean's Advisory Council
 Chair, Course Report Committee
 Chair, First-year Schedule Committee
 Founding Coordinator of Steering Committee of ASTER (Access to Science Through Experience in Research)
 Founding Coordinator of Faculty Teaching Circle
 Founding Sponsor of Pre-medical Book Club
 Coordinator of Teaching Assistant Training
 Pre-medical Promotion and Graduation Committee
 Academic Advisor to pre-medical and foundation students
 Pre-medical Curriculum Committee
 Pre-medical Admissions Committee

1999-2002 University of Houston-Downtown
 Instructional Technology Support Committee
 Science and Mathematics Education Committee

1994-1997 Louisiana State University
 Associate editor of the LSU Science Talk newsletter

1990-1994 Xavier University of Louisiana

Academic advisor to numerous pre-medical students
Department advisor to all biology education majors
Committees for Teacher accreditation, Service learning, Faculty development
Faculty Senate Officer

Extramural Professional Activities

Service to the Profession

Reviewer of proposals for 2010, 2011 NARST annual conferences

Outreach

Co-founder of Louisiana Certified Habitat Program, Louisiana Native Plant Society,
<https://www.lnps.org/louisiana-certified-habitat>

Acadiana Native Plant Project Board Member, President, Education Coordinator, including workshops for Yard2Habitat and Prairies 101, 2016-present

Certified Louisiana Master Naturalist, Acadiana Chapter, Spring 2016

Certified Texas Master Naturalist, Gulf Coast Chapter, May 2015

Accepted to Fulbright Specialist Program biology educator roster, 2015

Instructor in Houston Arboretum and Nature Center Adult Education series (Fall 2014-Spring 2015)

Lead instructor in Inquiry workshops for high school biology teachers in Qatar, part of LiScEN (Life Science Educator Network), March-May 2012

Instructor in Saturday High School student inquiry activities

Qatar Supreme Education Council Oversight Committee for Revision of the National Curriculum Standards for Math and Science

Biology advisor and judge to the Science Olympiad at Doha Independent Secondary School for Boys

Professional resource and Career Day Speaker at Qatar Academy in WCMC-Q Adopt-a-School program

Speaker at DeBakey School for Health Professions, Qatar Academy, and visitor to Al Bayyan IB biology class.

Chowa Parent Education Series, "Infowhelmed Parenting: Making Sense of New Findings in Brain Science," Yokohama International School, Japan. 2007

Guest lessons on special topics, including *Concept Mapping* for International Baccalaureate Diploma Programme Theory of Knowledge course and for special needs primary students, Yokohama International School, Japan; *Petrochemical Polymers*, *Hands-on organ dissection*, *Scale model of solar system*, *Oetzi's age*, *The food plants make* and others, CSPC International School, Hui Yang, China; *Birds*, *Water* and others, Valley Oaks Elementary School, Houston TX, USA.

After-school science clubs, *pro bono*, Yokohama International School, Japan and CSPC International School, Hui Yang, China. Term-long topics included *Skeletons*, *Sea Life*, *Looking Inside*, *Food Science* and others. 2004-2008

Steering committee that established the schoolyard habitat at Valley Oaks Elementary School, Houston, TX. 2002

Member of committees in the Houston area, including the University/College Coalition section and the Professional Development Task Force of HU-LINC (Houston Independent School District's NSF Urban Systemic Initiative), the advisory committee for the Ecostation exhibit at the Children's Museum of Houston 1999-2002

Steering committee that established the New Orleans Science and Mathematics High School. 1991-1993

Provider of professional development for secondary and post-secondary educators

Mentor Training for Academic Mentoring Matters, UL-Lafayette 2019, 2020

Presenter of teacher workshop on Concept Mapping, Yokohama International School, Yokohama, Japan, 2006.

Facilitator of workshop for HULINC (Houston Independent School District's NSF Urban Systemic Initiative) training for elementary science teachers. Workshop: "Observations that Lead to Investigations." 2001

Organizer of HULINC (Houston's NSF Urban Systemic Initiative) summer workshop for elementary teachers on use of FOSS and STC science kits. 2000-2001

Facilitator of Shell Say Yes! Science and Technology Integration in Urban Schools. Houston Independent School District. 2000-2001

Staff member of Eisenhower Molecular and Cellular Biology Institute for high school teachers. University of Houston-Downtown. 1999-2000

Presenter of teaching workshop for graduate students in Pharmacology at LSU Medical Center, New Orleans, LA, USA. 1996

Planner of local conference of the Greater New Orleans Task Force, a faculty development conference for Science and Mathematics professors in the Greater New Orleans area 1996

Faculty development workshop on Assessment at Nunez Community College, Chalmette, LA, USA. 1995

Conferences and Professional Development

Participant with UL-Lafayette faculty team at Southeast US PULSE conference

Participant in Course Design Practicum, University of Louisiana-Lafayette, Summer 2015

Participant in Quality Matters course, University of Louisiana-Lafayette, Spring 2015

Participant in Faculty Development Workshop on Teaching Freshman Seminar, University of Houston-Downtown, April-May 2014

Participant in On-Course Workshop, University of Houston-Downtown, May 2014.

Presenter in High Impact Practices Showcase, University of Houston-Downtown, April 2014

Presenter in Technology in Teaching Conference, University of Houston-Downtown, April 2014

Participant in SEA-PHAGES *In-silico* Workshop, Howard Hughes Medical Institute, December 2013

Participant in SEA-PHAGES *In-situ* Workshop, Howard Hughes Medical Institute, June 2013

Participant in Comprehensive Student Success Program (CSSP) Workshop, University of Houston, May 2013

Participant in SEA-PHAGES Symposium, Howard Hughes Medical Institute, 2013

Presenter in 2012 Annual meeting of NARST (National Association for Research in Science Teaching), Indianapolis IN, March 2012

Presenter in Gordon Research Conference on Visualization in Science and Education, Bryant University, Smithfield RI, July 2011

Presenter in NSEUS Conference (National Study of Education in Undergraduate Science), University of Alabama, Tuscaloosa AL, June 2011

Participant in PBL Workshop: STEM Learning: Putting Principles into Practice, University of Delaware, June 15-17, 2011

Participant in CASTL Institute on the Scholarship of Teaching and Learning, Creighton University, Omaha NE USA. June 2-5, 2010

Participant in NVivo 8 (qualitative data analysis software) workshop. Manchester England. May 12-14, 2009

Participant in 2010 Annual meeting of NSTA (National Science Teachers Association), Philadelphia PA

Participant in 2010 National CASTL Institute on the Scholarship of Teaching and Learning, Creighton University, Omaha NE

Presenter in 2010 Annual meeting of NARST, Philadelphia PA

Presenter in Qatar University Action Research Conference, 2009

Participant in 2009 Annual meeting of NARST (National Association for Research in Science Teaching), Garden Grove CA

Participant in faculty development workshops at UHD on technology integration, WebCT

Participant in NSF Chautauqua on Minority Retention, Dayton, OH, May 16-18, 2001.
Craig Nelson, Course Director

Participant in Xavier University's faculty development workshops on assessment strategies, classroom research, writing across the curriculum, critical thinking and others, 1990-1994

Research Support

- 2009-2012 *Formative Assessment and Epistemology*. Qatar National Research Fund National Priorities Research Program. US\$577,198. Roger Hinrichs, Principal Investigator. **Phyllis Griffard**, Co-Principal Investigator, 10% effort. (US\$85,950 to WCMCQ for 3 years)
- 2009-2010 *Effect of Book Club Participation on Epistemological Growth*. Qatar National Research Fund Undergraduate Research Experience Program. US\$20,000. **Phyllis Griffard**, Principal Investigator. Tayseer Mosleh and Saad Kubba, undergraduate researchers.
- 2009-2010 *Decoding of graphic representations used in undergraduate biology instruction*. Qatar National Research Fund Undergraduate Research Experience Program. US\$10,000. **Phyllis Griffard**, Principal Investigator. Yehia Elebiary, undergraduate researcher.
- 2009-2010 *Characterization of Mouse Models for Osteoporosis, Role of Osteoactivin, A Novel Factor in Bone*. Qatar National Research Fund Undergraduate Research Experience Program. US\$50,000. Fayez Safadi, Principal Investigator. **Phyllis Griffard**, Co-Principal Investigator. Amna Al-Khuzaei, Ahmed Al-Saei, Sarah Al-Khawaga, Aljazy Al-Maraghi, Shady Nakhla, undergraduate researchers.
- 2002-2005 *Minority Science Improvement*. U.S. Department of Education, \$194,214, Phyllis Griffard, Principal Investigator, 10% effort.
- And related private and federal grants to University of Houston-Downtown to support the UHD Scholars Academy and Houston area teacher professional development.

Research interests

My area of research interest is biology education. Within this are areas focused on the learner (e.g., alternative conceptions, visual aspects of cognition), instruction (e.g., use of concept mapping and book clubs), the content (e.g., evolution of biological thought), undergraduate research experience (infrastructure and support) and local context (e.g., intercultural issues, place-based education). The goal of my research in this area is to improve learning and other factors relating to future success of undergraduates in science-related careers and the public's understanding of local natural history.