

Scott Richard Shaw, Curriculum Vitae – 2024
Professor of Entomology and Curator of the UW Insect Museum

Education

B.S., Michigan State University, Entomology, 1977

M.S., University of Maryland College Park, Systematic Entomology, 1981

Ph.D., University of Maryland College Park, Systematic Entomology, 1984

Post-doctoral experience, Museum of Comparative Zoology, Harvard University, 1984-1989.

Professional Experience

- 1998-present, Professor of Entomology and UW Insect Museum Curator, University of Wyoming, Department of Ecosystem Science and Management (ESM) – Affiliate Faculty, Program in Ecology. ESM Faculty Senator, 2010-2018 – UW Faculty Senate Chair, 2016-2017.
- 1993-1998, Associate Professor of Entomology and Insect Museum Curator, University of Wyoming, Department of Plant, Soil, and Insect Sciences.
- 1989-1993, Assistant Professor of Entomology and Insect Museum Curator, University of Wyoming, Department of Plant, Soil, and Insect Sciences.
- 1986-1989, Instructor, Insect Biology, Harvard University, Extension School, Cambridge, MA.
- 1984-1989, Curatorial Associate, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts.
- 1982-1984, Biological Laboratory Technician- Insects, USDA Systematic Entomology Laboratory, U.S. National Museum of Natural History, Washington, D.C.
- 1982, Smithsonian Visiting Fellow, Smithsonian Institution, Washington, D.C.
- 1978-1982, Graduate Teaching Assistant in Entomology, University of Maryland, College Park, Department of Entomology.
- 1977, Undergraduate Teaching Assistant in Entomology, Michigan State University, East Lansing, Department of Entomology.

Narrative Biographical Sketch

I started collecting and studying insects at the age of four. Currently I'm a Professor of Entomology at UW and UW Insect Museum Curator. Subjects taught include Insect Biology, Classification, Evolution, Biodiversity, and Tropical Forest Ecology. My research focuses on the systematics and ecology of insects, especially beneficial parasitic wasps. I've studied insects and taught in Costa Rica, Ecuador, Mexico, and Brazil, with funding by the National Science Foundation. I've discovered and named more than 200 new insect species (mostly wasps) from 29 different countries. Fifteen insects have been named after me by other scientists. Over my career I've produced 196 publications about insects (full list in long CV). My book, *Planet of the Bugs, Evolution and the Rise of Insects*, was selected as one of the Top Ten Popular Science Books of 2014 by *The Guardian*. *Planet of the Bugs* has also translated into Korean, Japanese, Chinese, and Arabic language editions. My published suggestion for a Wyoming State Insect, Sheridan's Green Hairstreak Butterfly, was adopted as law by the Wyoming legislature in 2009. I served as Senator on the UW Faculty Senate for eight years, including four years on the Faculty Senate Executive Committee, and one year as Senate Chair. I designed and created the UW Insect Gallery in 1994, which is visited by about 3,000 visitors each year. Over my UW career I've archived more than one million preserved insect specimens in the research collections of the UW Insect Museum, which I continue to actively curate and develop.

<https://www.theguardian.com/science/grrlscientist/2014/dec/17/the-best-science-books-of-2014-biological-sciences>

Awards, Scholarships and Fellowships

- 2018, Andrew Vanvig Distinguished Faculty Lifetime Achievement Award, conferred by the UW College of Agriculture and Natural Resources.
- 2011, Faculty Senate Speaker Series Award recipient.
- 2010, Outstanding Educator Award, UW College of Agriculture and Natural Resources.
- 2003, University of Wyoming Internationalization Award and Medal of Recognition for “Outstanding Faculty Commitment to Internationalization,” UW International Board of Advisors.
- 1996, Excellence in Advising Award, Center for Academic Advising, University of Wyoming.
- 1993, 1990, 1989, Faculty Growth Award, Alumni Association, University of Wyoming
- 1984, President's Prize, Entomological Society of America
- 1984, Certificate of Merit and Cash Award for Superior Service, Systematic Entomology Laboratory, United States Department of Agriculture.
- 1983, Snodgrass Award, Entomological Society of America
- 1983, Gahan Graduate Scholarship, Department of Entomology, University of Maryland
- 1982, Smithsonian Student Fellowship, Smithsonian Institution, Washington, D.C.

Honors

- 1989-90, 2005-2024 Research Associate, Museum of Comparative Zoology, Harvard University.
- 2014 – Research Associate, Museo Ecuatoriano de Ciencias Naturales (MECN), Quito, Ecuador.
- 2024, honorary patronym, *Cretolyra shawi*, a new fossil wasp genus and species of Megalyridae from mid-Cretaceous Kachin amber, named by Vincent Perrichot, published in *Arthropod Systematics and Evolution*.
- 2013, honorary patronym, *Heterospilus shawi*, named by Dr. P. M. Marsh, Systematic Entomology Laboratory (retired), a Costa Rican wasp.
- 2013, honorary patronym, *Allorhogas scotti*, named by J.J. Martinez and A. Zaldivar-Riveron, a new wasp species from Chamela Biosphere Reserve, Mexico.
- 2012, honorary patronym, *Aleiodes scotti*, named by Buntika Areekul, a new wasp species from Thailand.
- 2007, honorary patronym, *Aleiodes shawi*, named by Joseph C. Fortier, a new wasp species from Arkansas and Maryland.
- 2005, honorary patronym, *Macrocentrus shawi*, named by Kenneth R. Ahlstrom, a new wasp species from Wyoming.
- 2004, honorary patronym, *Pseudognaptodon shawi*, named by Canadian biologist Daryl Williams, a new wasp species from Costa Rica.
- 2004, honorary patronym, *Triaspis shawi*, named by Mexican biologist Victor Lopez Martinez, a new wasp species from Costa Rica.
- 2004, honorary patronym, *Stantonina scotti*, named by Belgian biologist Yves Braet, a new wasp species from Peru.
- 2002, honorary patronyms, *Allorhogas shawi*, *Callihormius shawi*, and *Notiospathius shawi*, named by Dr. P. M. Marsh, three new wasp species from Costa Rica.
- 2001, honorary patronym, *Meteorus shawi*, named by Chen Jia-hua and Wu Zhi-shan, Beneficial Insects Laboratory, Fujian Agricultural University, Fuzhou, China, a Chinese wasp.
- 2000, honorary patronym, *Dirrhope shawi*, named by Wu Zhishan, Chen Jia-hua and Huang Ju-chang, Beneficial Insects Laboratory, Fuzhou, China, a Chinese wasp.

- 1993, honorary patronym, *Shawius braziliensis*, named by Dr. P. M. Marsh, Systematic Entomology Laboratory, a Brazilian wasp.
- 1989, honorary patronym, *Ascogaster shawi*, named by Dr. P. M. Marsh, Systematic Entomology Laboratory, a wasp from the southwestern United States.

Summary of Teaching and Mentoring Accomplishments

Thirty-five years teaching experience at University of Wyoming. Taught diverse courses including **Insect Biology** ENTO 300/ENTO 1000 (3 credits); ENTO 1001, **Insect Biology with Laboratory**, ENTO 1001(4 credits); **Insect Morphology**, ENTO 670/ENTO (3 credits); **Insect Classification**, ENTO 4684/5684 (4 credits); **Entomology Graduate Seminar**, ENTO 5852 (1-3 credits); **The Biodiversity Crisis**, ENTO 1100 (4 credits); **Practicum in College Teaching**, ENTO 5900 (1-3 credits); **Entomology Experimentation**, ENTO 1345 (3 credits); **Aquatic Insects**, ENTO 4678/5678 (3 credits); **Tropical Ecology**, RNEW 3000/ENTO 4686/ENTO 5689 (3 credits); **Agroecology Apprenticeship**, AECL 4920 (3 credits); **Writing in Botany**, BOT 4100 (3 credits); **Senior Honors Seminar, Insect Cosmology**, HP-4152 (3 credits); **Senior Honors Seminar, Cosmology of Life**, HP-4152 (3 credits); **Senior Honors Seminar, Cloud Forest Ecology in Ecuador**, HP-4152 (3 credits); **Topics: Museum Management**, ENTO 689 (1-3 credits); **Topics: Scientific Illustration**, ENTO 5689 (1-3 credits); **Topics: Insect Evolution**, ENTO 5689 (1-3 credits); **Topics: Advanced Curatorial Methods**, ENTO 5686 (1-3 credits); **Problems in Entomology**, ENTO 4686/5686 (1-3 credits); **Problems: Studies of Ecuadorian Insects**, ENTO 4686 (3 credits); **Research in Entomology**, ENTO 5850 (3 credits); **Wyoming Wildlands**, RNEW 2000 (3 credits); **Thesis Research**, ENTO 5960 (variable credits, numerous MS students advised); **Dissertation Research**, ENTO 5980 (variable credits, numerous PhD students advised); and **Tropical Biology: an Ecological Approach**, Organization for Tropical Studies, OTS-05-3, instructor and faculty mentor on-site at La Selva and Palo Verde research stations in Costa Rica.

Teaching approaches include undergraduate and graduate level courses; on-campus and study-abroad teaching; courses directed to majors and minors in Insect Biology, Entomology, and Agroecology; courses directed to students in diverse programs including Environment and Natural Resources (ENR), the University Studies Program (USP, S1, G1, C, PN), and the UW Honors Program (HP).

Recipient of the 2018 Andrew Vanvig Distinguished Faculty Lifetime Achievement Award, conferred by the UW College of Agriculture and Natural Resources.

Recipient of 2010 Outstanding Educator Award, UW College of Agriculture and Natural Resources, and 1996 Excellence in Advising Award, UW Center for Academic Advising.

2011, Faculty Senate Speaker Series Award recipient.

Recipient of 2003 University of Wyoming Internationalization Award and Medal of Recognition for “Outstanding Faculty Commitment to Internationalization” presented by University of Wyoming International Board of Advisors. Has actively engaged students in international study-abroad research experiences in Costa Rica, Ecuador, and Mexico.

Actively engaged numerous undergraduate students and public-school teachers in tropical research by **participation in National Science Foundation (NSF), Research Experience for Undergraduates (REU) and Research Experience for Teachers (RET) programs.**

Participation in diversity programs: faculty mentor for McNair Scholars Program students, SRAP (high school minority summer program), Elder Hostel, and Organization for Tropical Studies (OTS).

Indicators of student success include multiple students winning awards, grant support, and scholarships, including: **Gamma Sigma Delta Outstanding M.S. Graduate Student Award**, 2009; **GSD Outstanding PhD student award**, 2016; **Excellence in Student Achievement in Internationalization Award**, 2010, 2012, 2014 (3 students); undergraduate class participants awarded study-abroad support including **Cheney scholarships, Haub ENR grants**, 2009; **ESA Undergraduate Scholarship, Outstanding Undergraduate in Entomology awards**, 1992, 1994, and 1996; **Plummer Grants**; NSF-REU grants; **Beyond the Classroom travel grants; Ellbogen Outstanding Graduate Assistant Awards**, (3 students) 1999 (Nina Zitani), 2013 (Guinevere Jones), 2022 (Melanie Torres); **Minority & Women's Scholarships**, 1997-1999; **ENR scholarship**, 1997; **McNair Scholars awards; ESA Snodgrass Award**, 1997, **Outstanding Graduate Dissertation in Systematics**; one honors student mentored as an NSF-REU was selected as a **Rhodes Scholar** in 1994, another selected as a **Goldwater Scholar** in 2011.

Actively engaged in service outreach teaching via role as Insect Museum Curator. In 1993, created the public UW Insect Gallery, which attracts an average of 2,000 to 3,000 visitors per year to view educational teaching exhibits about insects. Actively engaged in tours and instruction for visiting public school classes. The Insect Gallery Project was selected in 2023 as a Presidential Fellows Project, funded by the UW President's Office.

Mentored and advised Sheridan 3rd and 4th graders with successful legislation designating a State Butterfly, Sheridan's Green Hairstreak, adopted as a Wyoming state symbol in February 2009. Their teacher Ms. Laurie Graves (fifth grade elementary teacher, Big Horn Elementary, Sheridan District 1) was selected and mentored by me as a participant in my 2009-2010 NSF Research Experience for Teachers (RET) program, which funded her to travel to Ecuador and participate with the Biodiversity Project, my UW Honors Cloud Forest Ecology class, my NSF-REU undergraduate research team, and other RET teachers. Following these experiences, Ms. Graves was selected as the 2011 Wyoming Teacher of the Year, and in 2012 was a recipient of the Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST).

Curriculum Innovations

Insect Biology, ENTO-1000 and ENTO-1001, taught from fall 1989 to spring 2024 (current assignment). This is the first new course that I taught and developed at UW, being a re-named and extensively revised version of the earlier class, Introduction to Entomology, ENTO-300. The current course model includes a lecture-only version (ENTO-1000) and a version with a laboratory (ENTO-1001). This course was developed to meet the biological sciences requirement for non-science majors for the first UW University Studies Program (USP), and the class remains a popular USP-PN science choice for university undergraduates of any major. Class sizes average from 40 to 70 students.

The Biodiversity Crisis, ENTO-1100, taught from spring 1993 to spring 1998. The Biodiversity Crisis course was developed to meet the biological sciences requirement for non-science majors for the newly developed UW University Studies Program in 1992. Topics covered include the characteristics and value of biological diversity, patterns of diversity and extinction, factors contributing to extinction of species, and what can be done to preserve species for the future. When first offered in 1993, this class was the first of its kind in the nation. The class had consistently high enrollments (ranging from 92 to 144 students per class). I taught this class (solo) in spring of 1994 with 144 students in lecture and eight associated laboratories (this is the largest semester class ever taught by a single faculty member in our department). In the summer semester of 1994, it was adapted into a two-week Elder Hostel short course with 40 students. Subject material from this class was later developed into my Tropical Ecology and HP Cloud Forest Ecology in Ecuador classes. A Tropical Forest Habitat room at the Agriculture Greenhouse Complex, with tropical plants, live tropical butterflies, and other insects, was developed for teaching this class. It was maintained for two decades and later used for teaching Insect Biology, Tropical Forest Ecology, and Cloud Forest Ecology.

Tropical Ecology, RNEW-3000, new class for spring 2005, previously taught and developed during 2003 and 2004 as a Topics course. This class was created to meet an environmental science requirement for students in the Environment and Natural Resources program. The Tropical Ecology course applies to the University Academic Plan 2004/2009, Distinction II, Action Item 8, by providing "interdisciplinary coursework in human ecology." It is an "interdisciplinary course that examines the influences of geologic time, evolutionary history, and native biota on human history." Subject material from this class was later developed into my HP Cloud Forest Ecology in Ecuador class.

Insect Cosmology, HP-4152-2, Honors Program Senior Seminar, being an experimental new HP class, was taught during fall semester 2004 and revised in fall 2005 as Cosmology of Life. This course reflects unique academic ideas that I developed over the prior decade. Course development in 2005 was supported by funding from the Wyoming NASA Space Grant Consortium. The course covers the history of the evolution of life on Earth, but tracing life back to its utmost origins: the origin of matter, energy, time, and space in the Big Bang. As with Tropical Ecology, this class also covers the topics mentioned in University Action Item 8, "geologic time, evolutionary history, and biota," but on a much grander time scale. Insect Cosmology covers more than 13 billion years of history. It was taught in fall 2006 and 2008 as Cosmology of Life (Honors Program 4152). Ideas from this class were developed into materials included in my popular science book, *Planet of the Bugs*. More information can be viewed at the class website, available on-line at: <http://www.uwyo.edu/cosmologyoflife/>

Cloud Forest Ecology in Ecuador, HP-4152-1, Honors Program Senior Seminar study-abroad summer session class, innovative class, taught in June 2009, June 2010, May 2011, and May 2012. Co-taught with UW botany professor Greg Brown, this study-abroad class allows UW honors and ENR students to study forest ecology at a high-elevation cloud forest in the Andes Mountains. During travel to the remote study site, students visited Quito, providing cultural experiences qualifying for USP, C1 credit. The diverse experiences of the 2009 and 2010 students and teachers are chronicled at: <http://yanayacu.weebly.com/>

The Biodiversity Project is a public science education project funded by a **Research Experience for Teachers** supplemental grants to my National Science Foundation research grant during 2012 and 2013. Four RET science teachers have traveled with me to Ecuador on this project. One of the

participating teachers, Laurie Graves of Sheridan, was selected as a 2012 recipient of the Presidential Award for Excellence in Mathematics and Science Teaching. Collaborating teachers and classrooms in four states conducted a comparative biodiversity research project in four different biomes: cloud forest in Yanayacu, Ecuador; broadleaf deciduous forest in New York and Ohio; grasslands in Torrington and Sheridan, Wyoming; and tundra in Anchorage Alaska. Each site surveyed the insect communities of three 3-meter x 3-meter plots. To survey the plots, photographs were taken of each insect found at each site. A website was designed as a forum to post student work, data, and photos, and to ask questions of each other and the Ecuadorian-based scientists. An “ask the expert page,” with questions and answers, was posted. Seventh grade students in New York researched answers to the questions posed by the younger students and they posted video responses that they researched.

<http://www.thebiodiversityproject.org/>

Grant Funding Received

***Funding supporting curriculum development, student and/teacher mentoring, and/or engaging students in the research enterprise are highlighted in BOLD font.**

- UW Agricultural Experiment Station 2020-2024 (current), McIntire-Stennis Research Project WYO-612-20 “Taxonomic and ecological studies of parasitoid wasps of forest ecosystems.” \$10,000 per year.
- **NSF-DEB-14-42110, Collaborative Research: Dimensions US-Biota Sao Paulo: Chemically mediated tri-trophic interaction diversity across tropical gradients, \$160,518 to UW for 7 years.**
- **UW Agricultural Experiment Station 2015-17 Competitive Grant, Studies of parasitoid wasps associated with mountain pine beetle, \$89,425.**
- **NSF-DEB-10-20751, CAPEA: Caterpillars and parasitoids in the Eastern Andes of Ecuador, September 8, 2010 to August 31, 2014 (total for 4 years, \$165,085). Supplements granted: 2011-2012 Research Experience for Undergraduates (REU) supplements (\$15,000), 2012 RET supplement (\$15,000), 2012 ROA supplement (\$24,615).**
- **UW Agricultural Experiment Station 2010-2012 Competitive Grant, Long-term changes in native bee diversity, abundance and phenology, co-PI with M. Dillon and C. Martinez del Rio, \$57,787.**
- **2009-2012 Interagency Agreement, Survey of aquatic beetles (Coleoptera) in Wyoming watersheds with emphasis on distribution and abundance of *Hygrotus* species (Dytiscidae), \$59,999 awarded from Wyoming Governor’s Office and Wyoming Game and Fish.**
- **2010 Wyoming NASA Space Grant Consortium Faculty Education Enhancement Grant, \$10,000, Teaching and Research for Undergraduates in the Andes of Eastern Ecuador: Tropical Cloud Forest Ecology.**
- **2009-2011 Global Perspectives Faculty Travel Grants, Research and Teaching in Ecuador, \$7,000 awarded from UW College of Agriculture and Natural Resources.**
- **2010 UW Honors Program course development grant, Cloud Forest Ecology in Ecuador, \$5,000.**
- **NSF-BSI-07-17458, Caterpillars and parasitoids in the Eastern Andes of Ecuador (renewal), multi-university collaborative ecological research with PI Lee Dyer, Tulane University, amount to UW: \$96,872 (revised budget), funded June 2007 for 4 years.**
- **NSF-DEB-10-26103, Caterpillars and parasitoids in the Eastern Andes of Ecuador, REU supplement, Research Experience for Undergraduates, \$7,500.**

- NSF-DEB-09-13110, Caterpillars and parasitoids in the Eastern Andes of Ecuador, REU supplement, Research Experience for Undergraduates, \$14,000.
- NSF-DEB-09-16318, Caterpillars and parasitoids in the Eastern Andes of Ecuador, RET supplement, Research Experience for Teachers, \$10,500.
- NSF-DEB-08-23094, Caterpillars and parasitoids in the Eastern Andes of Ecuador, REU supplement, Research Experience for Undergraduates, \$7,500.
- 2009 UW Faculty Grant-in-Aid, UW Research Office, Studies of Afro-tropical Insects: Megalyrid Wasps of Africa and Madagascar, \$7,500.
- NSF-BSI-03-46729, Caterpillars and parasitoids in the Eastern Andes of Ecuador, multi-university collaborative ecological research with PI Lee Dyer, Tulane University, amount to UW: \$46,506, funded May 2004 for 3 years.
- UW International Programs Faculty Travel Grants, \$6,000, Insect Studies in Ecuador, 2007-2011.
- West Virginia University (contract), *Aleiodes* of Eastern Forests, project to develop a guide to eastern forest *Aleiodes* wasps based on their caterpillar associations, \$5,000, 2004-2007.
- Wyoming NASA Space Grant Consortium, \$5000, curriculum development grant, 2005.
- NPS-Studies of parasitic wasps in Grand Teton and Yellowstone National Parks, ecological research on forest wasp populations, \$2,000, from May 2002 to Jun 2003
- NSF-DEB-93-00517, Manual of the New World genera of the family Braconidae (co-PI with Wharton, Marsh, and Whitfield), \$300,000, from May 1993 to Apr 1997
- NSF-REU supplement to DEB-93-00517, \$11,500, from May 1994 to Apr 1997
- NSF-DEB-97-26141, Systematics of the parasitoid wasp subfamily Doryctinae in Costa Rica, \$74,995, from Mar 1998 to Feb 2003.
- NSF-REU supplement to DEB-97-26141, \$4,000, from May 1999 to Feb 2001
- NSF-REU supplement to DEB-97-26141, \$5,000, from May 1998 to Feb 2001
- NSF-DEB-93-06314, Cladistics of the *Aleiodes* (Rogadinae), \$47,834, Jul 1993 to Jun 1997
- NSF-REU supplement to DEB-93-06314, \$4,975, from May 1996 to Jun 1997
- NSF-REU supplement to DEB-93-06314, \$4,000, from May 1995 to Jun 1997
- NSF-REU supplement to DEB-93-06314, \$5,000, from May 1994 to Jun 1997
- UW-Studies of insect biology in Costa Rica, \$2,000, from 1996 to 1997
- UW-Biodiversity of Costa Rican wasps: does anomalous diversity pertain? \$4,560, 1993 to 1994
- UW-Collaborative research with the Universidade Federal de Goias, Brazil, \$2,000, 1993 to 1994
- UW-Travel to Costa Rica for biodiversity studies, \$1,000, from 1992 to 1993
- UW-Enhancement of the insect collection, \$1,500, from 1991 to 1992
- USAID-A systematic study of the genus *Isomecus* (co-PI with Inayatullah), \$3,350, from 1990 to 1991
- NPS-Insect response to the Yellowstone fires of 1988 (co-PI with Lavigne, Lockwood and Christiansen), \$15,840, from 1990 to 1991
- American Philosophical Society-Research on parasitoid wasps of the tribe Rogadini, \$1,000, from 1989 to 1990.
- NSF-BSR-86-17129, Improvement of the MCZ insect collections (co-PI with Wilson, Bowers, and Carpenter), \$142,500, from 1987 to 1988

Scott R. Shaw - Publications List

Publications marked with an asterisk () denote those where students were actively engaged in the research enterprise, students were mentored during the project, and/or students are coauthors on the publication.

Popular science articles and books directed at teaching the general public (outside the college classroom) are entirely highlighted in **BOLD** font.

1. **Shaw, S.R. 1981.** A taxonomic study of nearctic *Ascogaster* and a description of a new genus *Leptodrepana* (Hymenoptera: Braconidae) (M.S. thesis). University of Maryland. 107 pp.
2. **Shaw, S.R. 1983.** A taxonomic study of nearctic *Ascogaster* and a description of a new genus *Leptodrepana* (Hymenoptera: Braconidae). *Entomography* 2: 1-54.
3. **Shaw, S.R. 1984.** *Stenothremma*, a new euphorine genus from Australia. *Proceedings of the Entomological Society of Washington* 86: 869-876.
4. **Shaw, S.R. 1984.** *A phylogenetic study of the subfamily Euphorinae (Hymenoptera: Braconidae)* (Ph.D. dissertation). University of Maryland. 186 pp.
5. **Shaw, S.R. 1985.** A phylogenetic study of the subfamilies Meteorinae and Euphorinae (Hymenoptera: Braconidae). *Entomography* 3: 277-370.
6. **Shaw, S.R.** and J. Edgerly. **1986.** A new braconid genus parasitizing webspinners (Embiidina) in Trinidad. *Psyche* 92(4): 505-511.
7. **Shaw, S.R.** 1987. Three new megalyrids from South America (Hymenoptera: Megalyridae). *Psyche* 94: 189-199.
8. **Shaw, S.R.** 1987. *Orionis*, a new genus from Central America, with an analysis of its phylogenetic placement in the tribe Euphorinae (Hymenoptera: Braconidae). *Systematic Entomology* 12: 103-109.
9. Marsh, P.M., **S.R. Shaw**, and R. Wharton. **1987.** An identification manual for the North American genera of the family Braconidae (Hymenoptera). *Memoirs of the Entomological Society of Washington* 13: 1-98.
10. Marsh, P.M., **S.R. Shaw** and R.A. Wharton (Chinese translation by Chao Hsiu-fu). **1988.** *An identification manual for the North American genera of the family Braconidae (Hymenoptera)*. 90 pp.
11. Loan, C.C. and **S.R. Shaw.** **1988.** Euphorine parasites of *Lygus* and *Adelphocoris* (Hymenoptera: Braconidae, and Heteroptera: Miridae), in: Hedund, R.C. and H.M. Graham (eds.), Importance and biological control of *Lygus* and *Adelphocorus* species in North America. *USDA Agricultural Review and Manual Series*. ARS-64: 69-75.
12. **Shaw, S.R. 1988.** *Carminator*, a new genus of Megalyridae (Hymenoptera) from the Oriental and Australian regions, with a commentary on the definition of the family. *Systematic Entomology* 13: 101-113.
13. **Shaw, S.R. 1988.** Euphorine phylogeny: the evolution of diversity in host-utilization by parasitoid wasps (Hymenoptera: Braconidae). *Ecological Entomology* 13: 323-335.
14. **Shaw, S.R. 1989.** A new Mexican genus and species of Dinocampini with serrate antennae (Hymenoptera: Braconidae: Euphorinae). *Psyche* 95(3-4): 289-297.
15. **Shaw, S.R. 1990.** A taxonomic revision of the Australian long-tailed wasps of the genus *Megalyra* Westwood (Hymenoptera: Megalyridae). *Invertebrate Taxonomy* 3(8): 1005-1052.
16. **Shaw, S.R. 1990.** Phylogeny and biogeography of the parasitoid wasp family Megalyridae (Hymenoptera). *Journal of Biogeography* 17(6): 569-582.
17. Lavigne, Robert J.; Lockwood, Jeffrey A.; Christiansen, Tim; and **Shaw, Scott R. (1990)** "Insect Response to the 1988 Fires in Yellowstone National Park," *University of Wyoming National*

Park Service Research Center Annual Report: Vol. 14, Article 36. Available at:
http://repository.uwyo.edu/uwnpsrc_reports/vol14/iss1/36

18. **Shaw, S.R. 1991.** An unusual manner of aggregation in the braconid *Chelonus* (*Microchelonus*) *hadrogaster* McComb (Hymenoptera). *Journal of Insect Behavior* 4(4): 537-542.
19. ***Shaw, S.R.** and M. Inayatullah. **1991.** Comments on case 2614: proposed designation of *Agathis longicauda* Boheman, 1853 as the type species of *Vipio* Latreille, 1804. *Bulletin of Zoological Nomenclature* 48(4): 332-333.
20. **Shaw, S.R. 1992.** Seven new North American species of *Neoneurus* (Hymenoptera: Braconidae). *Proceedings of the Entomological Society of Washington* 94(1): 26-47.
21. Wharton, R., **S.R. Shaw**, M.J. Sharkey, D.B. Wahl, J.B. Wooley, J.B. Whitfield, P.M. Marsh, and J.B. Johnson. 1992. Phylogeny of the subfamilies of the family Braconidae: a reassessment. *Cladistics* 8: 199-235.
22. *Lavigne, R.J., J.A. Lockwood, **S.R. Shaw** & T. Christiansen. **1992.** Insect response to the 1988 fires in Yellowstone National Park. Final Report. *University of Wyoming National Park Service Research Center Annual Report. NPS grant work product.*
23. **Shaw, S.R. 1993.** Three new *Microctonus* species indigenous to New Zealand (Hymenoptera: Braconidae). *The New Zealand Entomologist* 16: 29-39.
24. **Shaw, S.R. 1993.** Observations on the ovipositional behavior of *Neoneurus mantis* Shaw, an ant parasitoid from Wyoming. *Journal of Insect Behavior* 6(5): 649-658.
25. **Shaw, S.R. 1993.** Systematic status of *Eucystomastax* Brues and characterization of the Neotropical species (Hymenoptera: Braconidae, Rogadinae). *Journal of Hymenoptera Research* 2: 1-11.
26. **Shaw, S.R. 1994.** A new species of *Centistes* from Brazil (Hymenoptera: Braconidae: Euphorinae) parasitizing adults of *Diabrotica* (Coleoptera: Chrysomelidae) and key to New World species. *Proceedings of the Entomological Society of Washington* 97(1): 153-160.
27. *Lockwood, J.A., L.D. Debrey, C.D. Thomson, C.M. Love, R.A. Nunamaker, **S.R. Shaw**, S.P. Schell and C.R. Bomar. **1994.** The preserved insect fauna of Wind River Glaciers in Wyoming: insights into the ecology of the extinct Rocky Mountain Locust. *Environmental Entomology* 23(2): 220-235.
28. **Shaw, S.R. and J.A. Lockwood. 1994. Biodiversity and agriculture. Reflections Magazine 4: 12-14.**
29. Gauld, I.D. and **S.R. Shaw. 1995.** Chapter 12, The ichneumonoid families. Pp. 389-390, In: Hanson, P. and I.D. Gauld (eds.). *The Hymenoptera of Costa Rica*. Oxford University Press.
30. **Shaw, S.R. 1995.** Chapter 12.2, Family Braconidae. Pp. 431-463, In: Hanson, P. and I.D. Gauld (eds.). *The Hymenoptera of Costa Rica*. Oxford University Press, Oxford, UK.
31. **Shaw, S.R. 1995. The biodiversity crisis: a new challenge for entomological teaching. The American Entomologist 41: 134-135.**
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Publications marked with an asterisk () denote those where students were actively engaged in the research enterprise, students were mentored during the project, and/or students are coauthors on the publication.

Popular science articles and books directed at teaching the general public (outside the college classroom) are entirely highlighted in **BOLD** font.