

Chloe E. Albin

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United States Department of Agriculture-ARS
Center for Grain and Animal Health Research
Stored Product Insect and Engineering Research Unit
1515 College Avenue
Manhattan, KS 66503

EDUCATION

2016–2021 *Kansas State University, Manhattan, KS*
Bachelor of Science in Engineering (Major: **Chemical Engineering**; Minor: **Leadership Studies**)

WORK EXPERIENCE

2018–Present *United States Department of Agriculture – Agricultural Research Service, Manhattan, KS*

Biological Sciences Aide (Supervisor: Dr. Rob Morrison)

Contributed to research developing integrated pest management programs for post-harvest insects. Evaluated interactions between attractants, repellents, insecticide netting, biocontrol agents, and their hosts. Presented independent research at regional, state, and national conferences.

2018 *Kansas State University, Manhattan, KS*

Independent Research Project (Supervisor: Dr. Rob Morrison)

Focused research on the behavioral response of stored product insects exposed to cedarwood oil and its potential uses in a push-pull concept. Independently used video tracking software and a wind tunnel during experiment. Developed poster presentation to present findings at undergraduate research symposium.

2014–2019 *Columbian Theatre Foundation Inc., Wamego, KS*

Box Office Assistant (Supervisor: Clint Stueve)

Upgraded overall efficiency of ticketing system by implementing new software. Acted in interim, full-time management capacity during hiring processes. Assisted with event management and planning, and facilitated training and supervision of staff.

2016–2018 *Kansas State University, Manhattan, KS*

Undergraduate Research Assistant (Supervisor: Dr. R. Jeff Whitworth)

Improved efficiency of data collection by implementing new analysis procedure. Aided research on the impact of various commercial pesticides on Kansas field crops. Supported research on brown recluse spiders and their progeny. Regularly maintained the brown recluse colony.

PUBLICATIONS

- 2019 Morrison, W. R., Bruce, A., Wilkins, R. V., **Albin, C. E.**, & Arthur, F. H. (2019). Sanitation improves stored product insect pest management. *Insects*, 10(3), 77. doi:10.3390/insects10030077
- 2019 Ewing, R., Davis, H. N., Alstrom, B. L., **Albin, C. E.**, & Whitworth, R. J. (2018). The impact of scavenging versus predation on weight change and survival of the brown recluse spider *Loxosceles reclusa* (Araneae: Sicariidae). *Kansas Entomological Society*, 91(2), 101-109.
- In Review Ewing, R. "JR", Davis, H., Alstrom, B.L., **Albin, C.E.**, Kragelund, A.M., and Whitworth, R.J. Essential oils as an alternative to conventional pesticides for managing brown recluse spiders, *Loxosceles reclusa*, (Araneae: Sicariidae).
- In Prep. Rault, L., Bingham, G., Quellhorst, H., **Albin, C.E.**, Campbell, J.F., Ellers, F., and Morrison, W.R. The behavioral response of stored product insects to volatile compounds exhibiting documented repellency to a range of other arthropods.

PRESENTATIONS

Summary: Seven presentations given in three US states.

- Nov. 2019 **Albin, C. E.** and W.R. Morrison. The behavioral response of the post-harvest biocontrol agent, *Theocolax elegans* to volatile stimuli, depending on natal host environment. 67th Annual Meeting of Entomological Society of America, St. Louis, MO.
- Nov. 2019 Morrison, W.R., R. Wilkins, H. Quellhorst, R. Grosdidier, and **C.E. Albin**. Can we afford to stop IPM after harvest? Farm to Fork IPM programs to improve the sustainability of pest management for the entire agricultural supply chain. 67th Annual Meeting of Entomological Society of America, St. Louis, MO. **(Invited)**
- Nov. 2019 Quellhorst, H., **C. Albin**, J.F. Campbell, F. Eller, and W.R. Morrison. When beetles prove uncooperative: the behavioral response of the red flour beetle, *Tribolium castaneum* (Coleoptera: Tenebrionidae) to attractive and repellent compounds that are neither. 67th Annual Meeting of Entomological Society of America, St. Louis, MO. **(Invited)**
- Apr. 2019 **Albin, C. E.**, H. Quellhorst, J. Campbell, F. Eller, and W.R. Morrison. Behavioral response of stored product insects exposed to cedarwood oil from a novel extraction method. 2nd Annual Virtual Symposium of the International Branch of the Entomological Society of America.
- Mar. 2019 **Albin, C. E.**, H. Quellhorst, J. Campbell, F. Eller, and W.R. Morrison. Potential repellency of cedarwood oil from a novel extraction method to stored product insects. 74th Annual Meeting of the North-Central Branch of the Entomological Society of America, Cincinnati, OH
- Mar. 2019 **Albin, C. E.**, H. Quellhorst, J. Campbell, F. Eller, and W.R. Morrison. Potential repellency of cedarwood oil from a novel extraction method to stored product insects. 95th Annual Meeting of the Kansas Entomological Society, Overland Park, KS
- Dec. 2018 **Albin, C. E.**, H. Quellhorst, J. Campbell, F. Eller, and W.R. Morrison. Potential repellency of cedarwood oil from a novel extraction method to stored product insects. 3rd Annual Undergraduate Research Symposium, Kansas State University, Manhattan, KS

AWARDS & GRANTS

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| Apr. 2019 | 3 rd Place, Undergraduate Poster Competition (\$50), Kansas Entomological Society |
| Mar. 2019 | 1 st Place, Undergraduate Poster Competition (\$300), North-Central Branch Meeting, ESA |
| Mar. 2019 | Student Travel Grant (\$200), North-Central Branch, ESA |
| Dec. 2018 | Faculty's Excellence Award, KSU Undergraduate Research Experience, Poster Presentation |
| 2016-Present | Medallion Leadership Scholarship (\$5,000), Kansas State University |
| 2016-Present | Sarah Katherine Watt Education Fund (\$2,500), Wamego Community Foundation |

SKILLS

Communication: Skilled in Microsoft office, data processing, documentation, and oral presentations.

Computer: Proficient in VBA, MATLAB, and Aspen.

Laboratory: Qualified in all primary laboratory skills. Independently able to operate video tracking software (Ethovision) and wind tunnels.

Field: Assisted with land preparation, crop management, insecticide application, and harvesting.

OUTREACH

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| 2017–Present | Ambassador , Kansas State Engineering Department: Kansas State University, Manhattan, KS Responsibilities: Provided student prospective on engineering and college to prospective students and guests and led tours of the engineering facility during a weekly office hour. |
| 2016–Present | Judge , National Catholic Forensics League National Qualifier: Wamego High School, Wamego, KS Responsibilities: Evaluate student acting and speaking performances, provide tournament management rankings of evaluated performances, and prepare feedback for student development. Attendance: 100 |
| 2016–Present | Judge , Kansas Regional Forensics Competition: Wamego High School, Wamego, KS Responsibilities: Evaluate student acting and speaking performances, provide tournament management rankings of evaluated performances, and prepare feedback for student development. Attendance: 200 |
| June 2019 | Workshop Organizer , Girls Researching Our World Program: Kansas State University, Manhattan, KS Responsibilities: Guided middle school girls through interactive activities about pollinators, pests, and natural enemies. Presentation titled “Good and bad insects in pre-harvest and post-harvest agriculture”. Attendance: 30 |
| Feb. 2019 | Student Mentor Girls Researching Our World Program: Kansas State University, Manhattan, KS Responsibilities: Guided middle school girls through a series of interactive activities constructed to increase their interest in STEM fields. Attendance: 30 |

- Spring 2018 **Judge**, Kansas Regional Forensics Competition: Rossville High School, Rossville, KS
Responsibilities: Evaluate student acting and speaking performances, provide tournament management rankings of evaluated performances, and prepare feedback for student development.
Attendance: 200
- Spring 2018 **Selections Volunteer**, Engineering Ambassador Selections: Kansas State University, Manhattan, KS
Responsibilities: Facilitated interviews with prospective Ambassadors.
Attendance: 150
- Fall 2017 **Mentor**, Kansas State Undergraduate Research Experience: Kansas State University, Manhattan, KS
Responsibilities: Guided a student through their first research experience. Helped prepare them to present at the poster symposium at the end of the Fall 2017 semester.
- Fall 2017 **Group Leader**, College Leadership, Understanding, and Education (C.L.U.E.) Program: Kansas State University, Manhattan, KS
Responsibilities: Led and facilitated discussion about presentations. Acted as a student mentor and resource for participants.
Attendance: 150

PROFESSIONAL MEMBERSHIPS

- 2019–Present Kansas Entomological Society
2018–Present Entomological Society of America
2017–Present Kansas State College of Engineering Ambassador
2016–2017 Kansas State Engineering Student Council
2016–2017 Leaders in Freshman Engineering (L.I.F.E)

RELEVANT COURSEWORK

Chemistry I & II, Chemical Process Analysis, Chemical Analysis, Computational Techniques in Chemical Engineering, Ch.E. Thermodynamics I & II, Written Communication for Engineers, and Organic Chemistry I & II.

REFERENCES

Dr. Rob Morrison, Research Entomologist

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Tel: (785) 776-2796
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Clint Stueve, Executive Director

Columbian Theatre Foundation Inc.
521 Lincoln Avenue
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Dr. R. Jeff Whitworth, Associate Professor of Entomology

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