

Colorado State University
College of Agricultural
Sciences

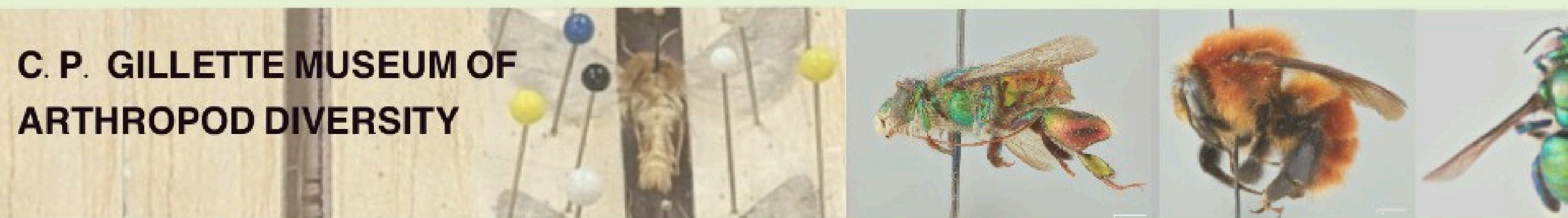
C. P. Gillette Museum of Arthropod Diversity

2025 Newsletter

**Year in Review: Collaboration,
Appreciation, Innovation**

Find Inside:

Montana Moth Updates
Student Successes
Volunteer Appreciation
Outreach Efforts
And much more!



C. P. GILLETTE MUSEUM OF
ARTHROPOD DIVERSITY

Museum in Numbers - 2025

Home to nearly 5 million individual insects and other arthropods, the collection within the C.P. Gillette Museum of Arthropod Diversity is one of the most comprehensive in Colorado and throughout the Rocky Mountain Region.

The meticulous curation of this collection has facilitated collaborations with research projects such as the Montana Moth Project and the iDigiBees Biogeography Database. The process of transcribing the museum's collection into online databases has expanded the museum's reach on arthropod research, being cited in 351 publications since 2020, 56 studies in 2025 alone.



100.00+ Specimens Databased in 2025

62,000 total digitized bee records and 41,000 moth entries. Data of arthropods from the museum are uploaded to Ecdysis and the Global Biodiversity Information Facility.



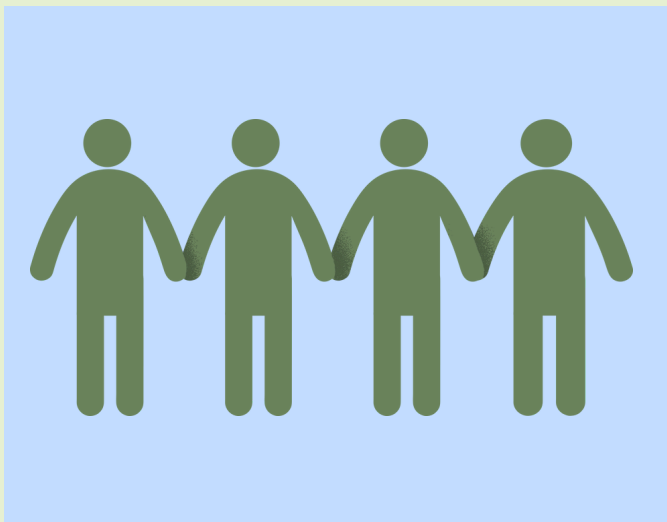
Visited by 950 Guests

In just the first three quarters of the year, including Dennis Bruner, great grandson of Clarence Gillette, students (undergraduate to elementary school), scientists, professors and other CSU faculty, community members, and more who sought the museum for research, formal tours, or further knowledge of arthropods and this unique collection.



12,000 New Montana Moth Specimens

This year saw 1,924 different species databased in Ecdysis. This number will increase next year with fresh plans for cataloging Orthoptera and Coleoptera. 850 new books were added to the museum's Bruner library.



Developed a Strong Team of 66 Scientists

With the help of generous donors, CSU's Department of Agricultural Biology, an NFS grant for iDigibees, 49 community scientists, graduate, and undergraduate volunteers, and 17 funded individuals for the Montana Moth and iDigiBees projects, the museum has accomplished many feats in 2025.

Our Mission

Since its founding in the late 1800's, the Gillette museum has remained committed to its mission of discovery, preservation, and promotion of the Rocky Mountain Region's diverse arthropods. Members of the public, the scientific community, and Colorado State University can engage with the museum through tours, internships and volunteer programs, and research collaboration to further acknowledgement of arthropods as critical species across the globe. The C. P. Gillette Museum of Arthropod Diversity serves to uphold CSU's land-grant mission of inclusive learning, collaborative engagement, and intentional discovery. These values manifest in the museum's four pillars of value: curiosity, excellence, inclusion, and community. This newsletter serves to highlight the accomplishments of the museum's team throughout 2025.



Thanking John Nordin



John Nordin, lifetime collector of lepidoptera has made astounding contributions to the museum, presenting the largest and most complete lepidoptera donation to the museum ever received. During his time working as a biological engineer Nordin traveled the country and collected everywhere that he

went, his collection spans from Alaska to the Florida Keys.

Specimens in his collection date as far back as the 1950s, with the collection numbering over 150,000 individuals. This donation, combined with the material and pending financial donation makes Nordin one of the most significant of the museum's donors. His legacy lives on in his collection, which volunteers are sorting, identifying, and categorizing. Nordin unfortunately passed away this year after a battle with cancer, but his contributions to the community in the museum and the community in his church keep his memory alive.

Thanking Paul Opler

We extend our deepest gratitude to Dr. Paul Opler for his extraordinary generosity in designating a portion of his estate to support the C. P. Gillette Museum of Arthropod Diversity. This gift reflects his lifelong commitment to advancing entomology and education, and it will ensure that future generations of scientists and enthusiasts have access to the rich collections and resources he helped build. Dr. Opler's legacy through his scholarship, mentorship, and now

now his philanthropy will continue to inspire and strengthen our mission to promote the understanding and appreciation of arthropod diversity.



Celebrating Six Years of Montana Moth Project

From its humble beginnings as Mat Seindensticker's hobby project, the initiative has grown exponentially into an organization that has brought much insight to an understudied part of Montana nature: the moths. This project began when Mat noticed an extreme lack of Lepidoptera (moths and butterflies) records in the state, inspiring him to collect specimens in his free time. Through this venture Matt came into contact with lepidopterist Chuck Harp, who supported Matt in his creation of the nonprofit Northern Rockies Research and Educational Services, which has doubled its number of statewide Lepidoptera records since its creation.

The nonprofit had the goal of establishing at least one sampling site in each of the 56 Montana counties by year five, reaching this goal while collecting 65,000 specimens. Now that this has been accomplished, the project is moving forward in its new goal of sampling each county in the spring, summer, and fall seasons, following the motto "early and late makes it great". This goal is already well under way thanks to the dedicated Montana Moth team.

The project began at the Gillette Museum with a very small team, Chuck Harp spreading 9,000 specimens alone after the project's creation. Since then the team has expanded to 11 paid Montana Moth spreaders and countless

volunteers at the Gillette museum.

This team identifies, spreads and mounts, and enters each specimen into the online database Edycsis, providing an extremely valuable way to access the vast catalogue of Montana Moth specimens.

This project has enjoyed many successes; in terms of macro moths alone the project has already published the discovery of three new record of moth in the state of Montana, with several more in the review process. The project has also been extremely successful in the realm of outreach thanks to Marian Kirst, who joined the team in 2024.



UV traps used for specimen collection



C. P. GILLETTE MUSEUM OF ARTHROPOD DIVERSITY



With masters in both Entomology and Science Communication, Marian amassed a team of mostly female community scientists to support the project on the rarely sampled east end of Montana. Through her connections at the Montana Audubon Center and the organization Zoo Montana, Marian inspired many to volunteer for collections, and was able to collect in unique terrain.

She expresses extreme respect and gratitude for the many dedicated volunteers who donate their valuable free time to this project, three of the most long standing being Montana residents: Mary Mullen, Claudia Fife, and Gwen Satterfield.

In the upcoming year Marian Kirst will be moving on from the Montana Moth project, with plans of contributing to other wildlife research with the aim of expanding upon the ecological knowledge of Montana.

Throughout her time Marian worked on collections for the Montana State University iDigibees project during the day and the Montana Moth project at night, spending countless hours contributing to the entomological knowledge of her home states. Marian says that the valuable experience and knowledge that she gained from the Montana Moth project creates a solid foundation for the creation of similar future projects.

Though the project will miss Marian's contributions, it will continue strongly with the enthusiastic support of volunteers of all ages. As the project increases its sampled range there is a high chance of the discovery of more new species, as well as a greater opportunity for employees and volunteers alike to further their skill and understanding of Lepidoptera, and the overall gain of ecological knowledge of the state of Montana.



Bruner Library and the Digital Shift

The C.P. Gillette Bruner Library contains roughly 5,000 volumes of monographs, journals, field guides, and textbooks pertaining to entomology. This collection encompasses volumes from 150 years ago to recent publications, curating for the goal of creating a library that can support the entomological work of the museum, the university, and the community as a whole.

From boxes to compactor shelves the library has expanded significantly since it was unpacked 15 years ago. The collection fills one room, with several offices containing paramaterials such as field journals, correspondences, and supplementary collection site information that provides depth to the rest of the collection.

Volunteers have spent many hours making the library accessible by sorting volumes into taxonomic groups, with further plans to divide these groups into individual species for extreme ease of use. Volunteers also work to sort through the many donations that the museum receives on a weekly basis, identifying the pieces that will be the most beneficial to the collection.

One key volunteer for the Bruner library in the past year was Sarah Bowyer, a community volunteer who took her library expertise from the Old Town Public Library and applied it to bettering the museum collection. Sarah enjoyed her time sorting, cataloguing, and digitizing library volumes, as well as



communicating the library's work and mission to tour groups. Sarah has since moved to Coeur d'Alene, Idaho.

With the help of dedicated volunteers the library is working to achieve its most significant goals: the digitalization of the library catalogue and the increase of patronage, which go hand in hand. The library recognized a need for digitization of the volumes to meet the demands of a modern world, and therefore has digitized over 3,000 of the current 5,000 library volumes. In the coming year, as the digitization process is more fully completed the collection will be posted to an online library catalogue, through which patrons will be able to access a full digital catalogue of the library's materials.

This endeavor aims to generate more use of the library and provide greater support for those who already utilize its volumes. Moving forward the library plans to further advertise and increase community engagement with student entomologists and campus organizations.



How On Earth: Orthoptera and Hemiptera

Museum volunteer Tim McNary was featured on [KCNU science radio show](#), spreading knowledge grasshoppers, crickets, cicadas, and related insects in Larimer county and Colorado.

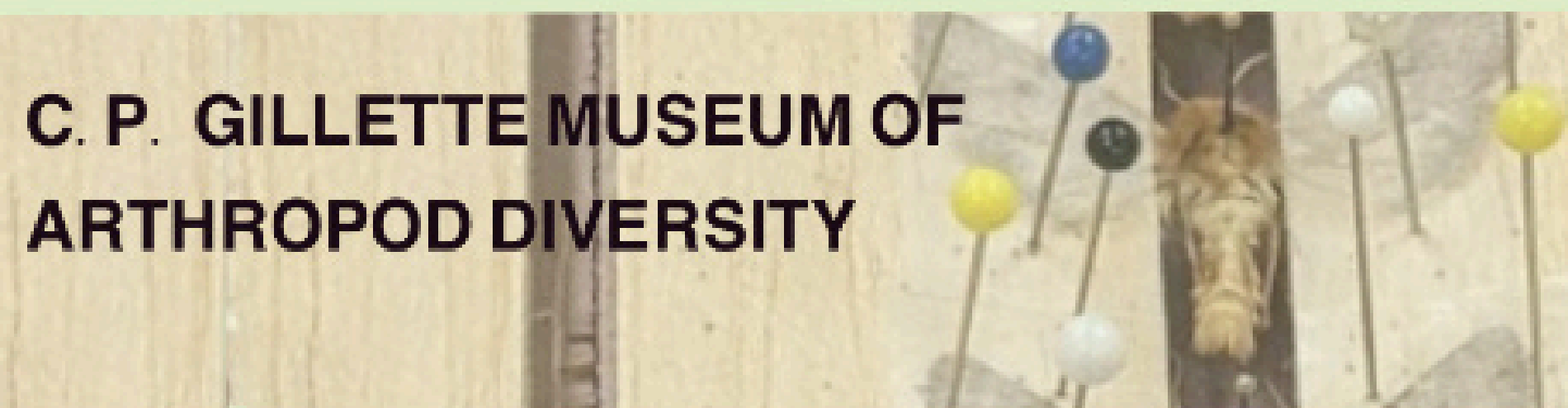
While attending CSU as an undergraduate, Tim was inspired by involvement in grasshopper research to pursue a masters program in rangeland ecology, with a focus on the relation to entomology. This led to a successful career in invasive pest management. This took Tim across the country and led to involvement in many valuable projects.

Tim has spent many years collecting, supporting both an extensive private collection (of which he donated 10,000 specimens to the museum) and to a project that is now being held at the University of Mississippi; this project aims to collect data and create an understanding of the Orthoptera (grasshoppers and kin) species that live throughout the American West. The project has resulted in the discovery and redefinition of many new Orthoptera species, two of which came from Tim's own specimens, now named *Melanoplus cartharti* and *Trimerotropis aberasturii*. With this information, Tim is able to keep the museum's database of over 25,000 orthoptera specimens up to date.

With this vast body of experience under his belt, Tim was invited by the KCNU Station to do a segment on singing insects with the aim to communicate about singing insects and the importance of arthropods to the community. This segment can be viewed through the QR code on this page.

Over the last ten years Tim has managed the Orthoptera and Hemiptera (true bugs) collections at the museum, providing a wealth of knowledge on the management of these species and this collection. It is likely Tim will spend a short period in the summer of 2026 at Oregon State University, providing the same level of support for their collection; this project will involve the cataloguing, identifying, and adding to the Orthoptera collection.

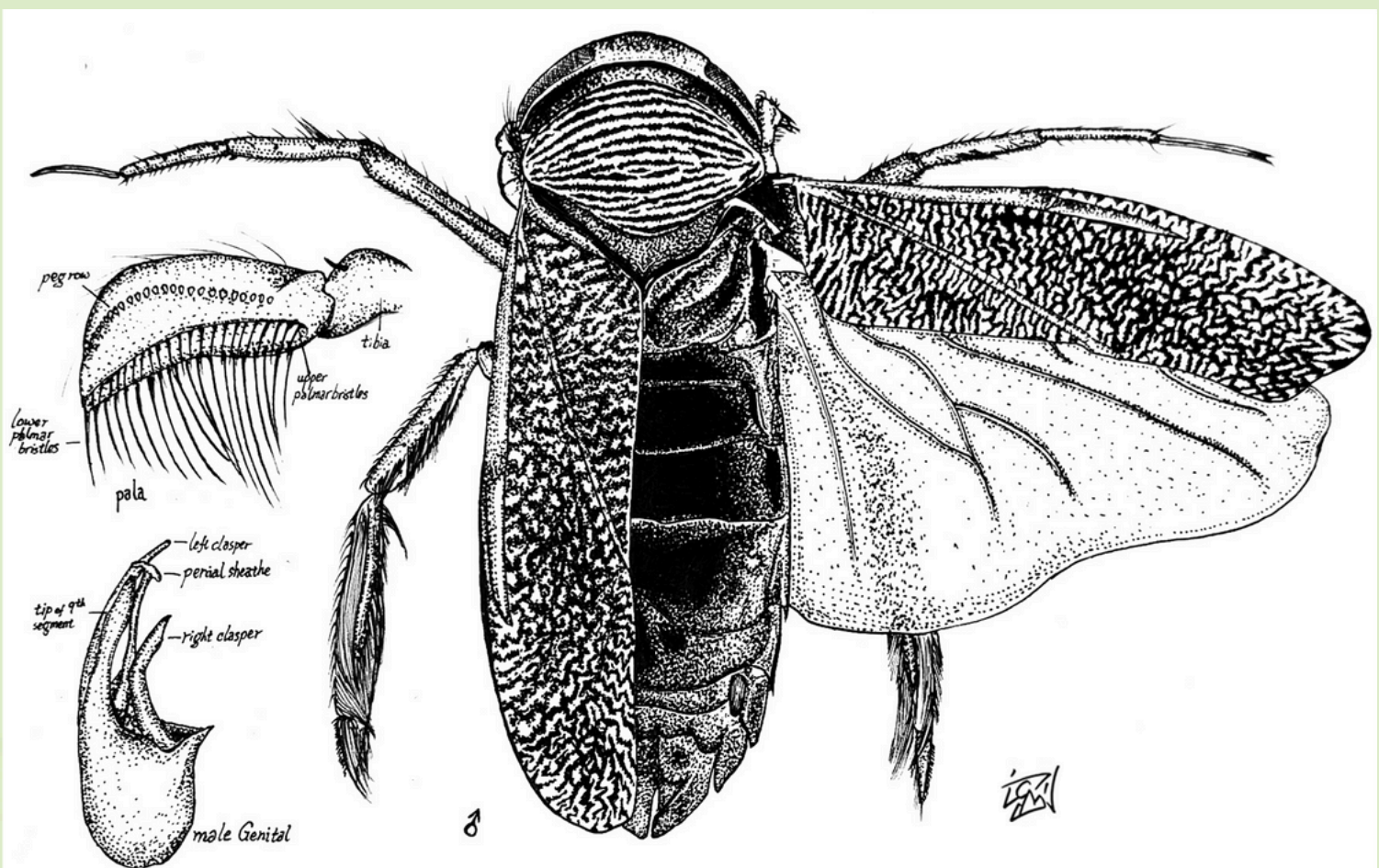




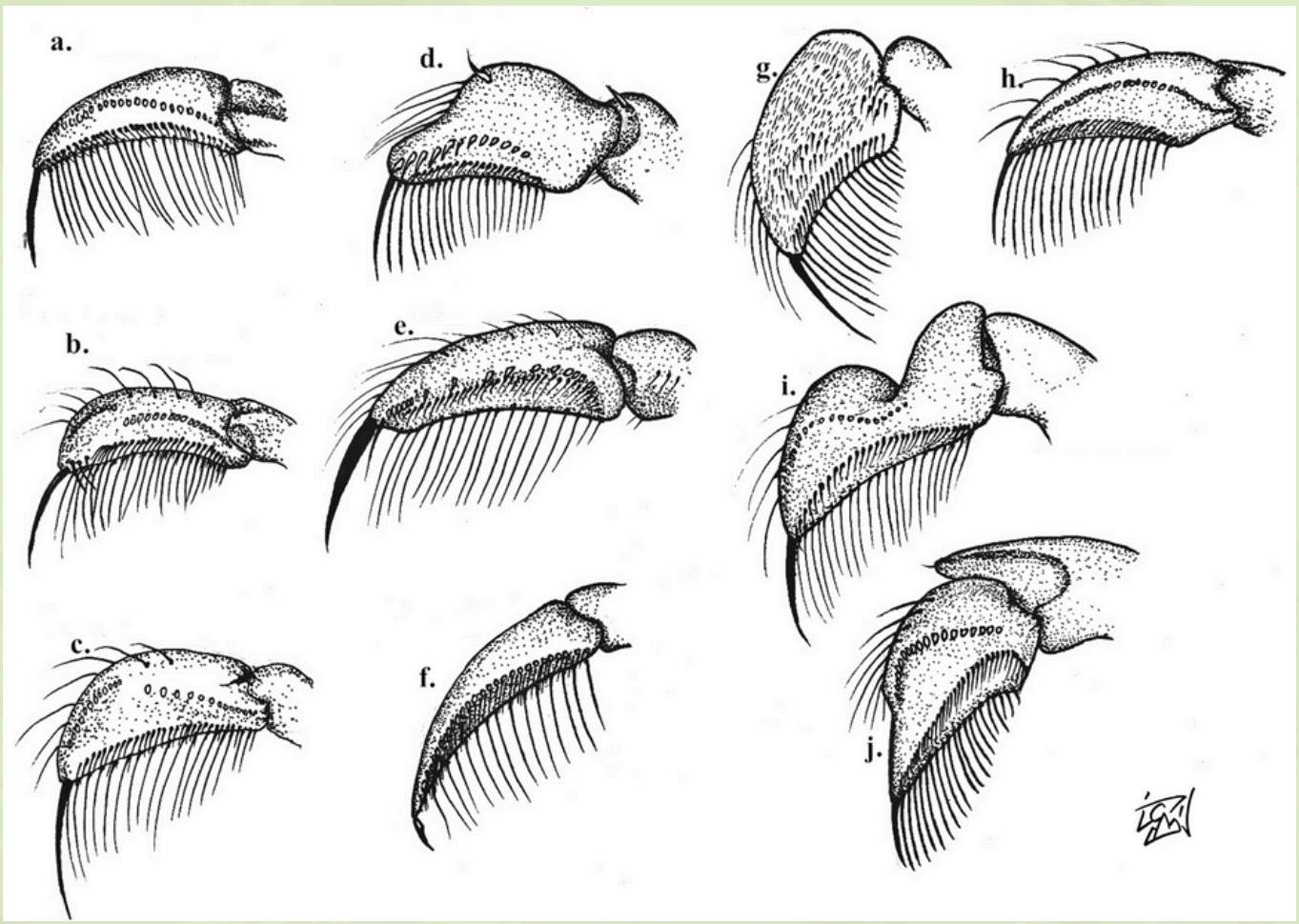
Gerromorpha and Nepomorpha of Colorado

A new checklist of insect species occurring in Colorado has been submitted for publication by one of the Museum's graduate students, Leo Liu. The list contains 77 individual species, 13 families, and 30 genera of aquatic and semi-aquatic true bugs. Leo created a detailed micron pen illustration for each genus, including identifying features. These fantastically detailed drawings were referenced from Museum samples that Leo relaxed and spread to showcase the characters. These scientific illustrations not only serve the purpose of combining Leo's passions for art and insect science, they also support identification of insects in this guide.

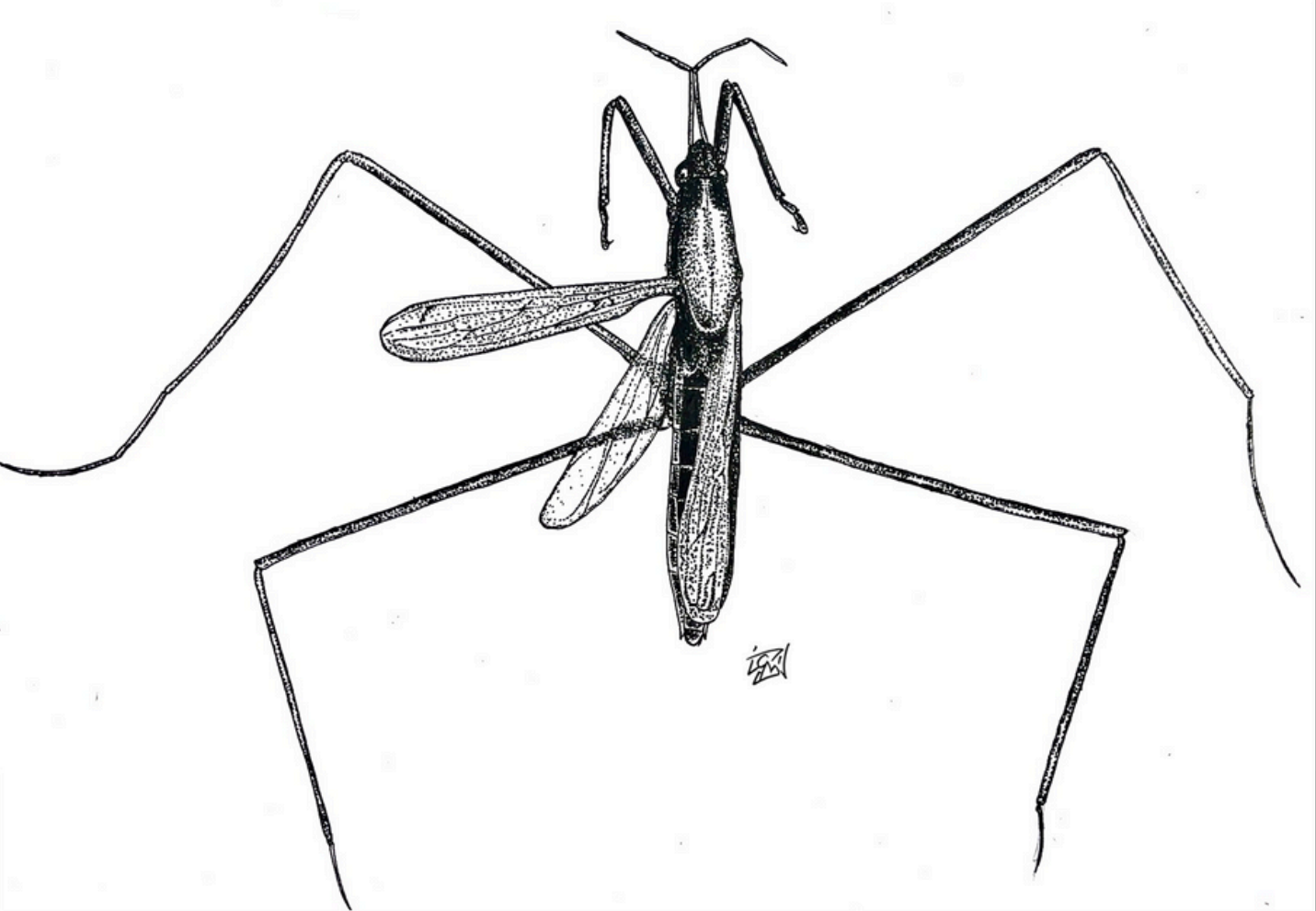
With this project Leo aimed to bring awareness to the importance of insects in ecology and land management, hoping to destigmatize insects and show people their value in the science field. Leo has a passion for education and outreach, as demonstrated in their graduate work and hobbies; in their free time they continue to promote entomology in the form of social media outreach. Moving forward, Leo is contributing to the publication of a scientific children's book with a focus on entomology to inspire young entomologists. Their dedicated and inspired work demonstrates their passion for entomology, science communication, and the importance of art in the sciences.



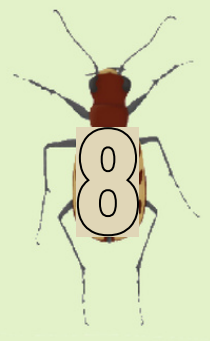
Hesperocorixa laevigata



paleae (front legs) of Corixidae



Limnopus notabilis



Student Spotlight

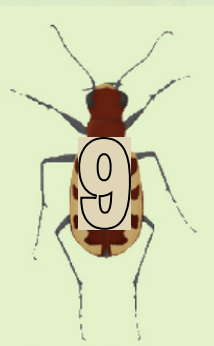
An important goal of the Gillette Museum is to support students and life long learners in their exploration of entomology. The museum encourages student volunteers and interns to discover how curation, research, and communication can build and improve their skill set through involvement in research and museum projects. The museum wants to highlight students who are graduating in the near future and encourage them as they move forward in their careers.

Mia is an undergraduate finishing her degree in Zoology with a minor in Entomology. Previously working with the Bug Zoo, Mia Silbert began volunteering with the museum in fall of 2025 wanting to further her entomology experience. Although her main interests are in arachnids, Mia enjoys the spreading and pinning work that she does for the Montana Moth project. Her main interests are in exploring the applications of venom as anti parasitic medicine, parasitology and vector biology, and museum curation as an educational tool. Mia states that she wished she joined the museum sooner as the experience has been valuable, and since she is not ready to stop her work for the museum, she plans to continue volunteering post graduation.

Emma Blanding is also a Zoology major/Entomology minor who is graduating in the spring of 2026. She began with the museum two years ago, seeking entomological experience she sorted and point-mounted specimens from sweep nets for the museum. Broadening her experience, Emma shifted to databasing for the Montana Moth project. She appreciates the museum and the direction that it gave for her future career; Emma hopes to pursue a graduate program that will help her to teach and do research in systematics and taxonomy.

Emma Allen is graduating in fall of 2026 with a degree in Agricultural Biology, focusing on entomology. Looking for more experience in the entomology field Emma began volunteering with the museum in the spring of 2025. She is a dedicated databaser for the Montana Moth project, and her interest in Hymenoptera makes her a valuable museum member for the possible expansion of museum operations into ant pinning and databasing. Emma appreciates her experience with and welcoming environment of the museum, Emma plans to stay with the museum until graduation, and hopes to pursue a graduate program that will allow her to be involved in field work and the research of the social dynamics of Hymenoptera.

Oliva Lucas is a junior at CSU majoring in Agricultural Biology with a focus in Entomology, interested in both Lepidoptera and museum



C. P. GILLETTE MUSEUM OF ARTHROPOD DIVERSITY

curation. Olivia began with the museum to get greater experience in Entomology and explore her interests. For the museum Olivia has spent two years identifying, sorting, point mounting, and accessioning Lepidoptera specimens. Through her partnership with the museum Olivia has been able to take part in two Smithsonian projects, one completed and one ongoing, in the identification and study of Idaho and now Montana ants; these projects aim to understand the effect pesticides have on ants. Also in partnership with the museum, Olivia was able to spend three days at Cornell University cataloguing Lepidoptera specimens from the state of Montana to support both the Cornell collection and obtain data for Montana Moth project. Olivia says that she feels very lucky and grateful to be a part of the museum, gaining valuable experiences and learning much from her peers.

Christina Nimmo has spent eleven years with the museum databasing and identifying specimens, specializing in micro moths. After an independent study in integrated pest management, Christina aims to enter the Integrate Pest Management Graduate program at CSU next semester. Christina says that volunteering at the museum and learning from experts has been amazing; this experience combined with her interest in invasive species impact and agricultural implications of pests makes Christina an excellent graduate candidate. As Christina pursues her degree, she will continue with the museum and its projects.

Vilas Brown is a PhD candidate based at the C.P. Gillette Museum, pursuing research on the ant genus *Stenamma* as well as phylogenetics of two different families of wasps. Vilas enjoys working with Hymenoptera and the opportunities to work with rare taxa, hoping to pursue this as well as museum curation in the future. Alongside their PhD work, Vilas has organized a symposium about Queer Entomology, held for the second time at the Annual Meeting of the Entomological Society of America. This year's theme focused on connecting queer scientists across generations.

Stephanie Eskew is a PhD candidate studying rose gall wasps and parasitic wasps that exploit their galls. Stephanie has worked on this research for multiple years, transferring from Moscow, Idaho, and many of the specimens that she studies were harvested from rose fields in the Moscow area. This work includes point mounting tiny Hymenoptera from the galls, studying coevolution between the wasp and their host plant, and using DNA to create phylogenetic trees that give a better understanding of Hymenoptera evolution. Stephanie hopes to wrap up her dissertation in the following year and move on to collection curation. She feels that her experience with the museum has helped her get back in touch with her original interest in entomology outreach and communication.



Student Spotlight



Mia Silbert



Emma Allen



Emma Blanding



Christina Nimmo



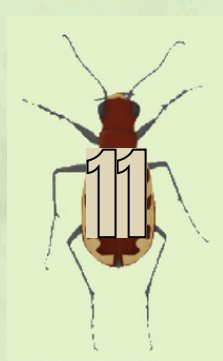
Olivia Lucas



Vilas Brown



Stephanie Eskew



Our Outstanding Volunteers

The C. P. Gillette Museum of Arthropod diversity fosters skill development in curation, research, and communication for volunteers through involvement with museum operations. The museum supports volunteers in every level of engagement and education of entomology, from graduates to community scientists. These volunteers keep the museum alive, being a crucial part of the Museum's success in every area. The C.P. Gillette Museum wants to thank each and every volunteer for their valuable contributions and highlight certain volunteers for their outstanding contributions.

Jan Kilgore is the Museum's longest continuously working volunteer, having started in 2006.

Having an Entomology masters degree focusing on aquatic insects, Jan began with the museum by identifying mayflies for the aquatic insect collection. When this project ended, Jan continued with the museum, databasing moths, butterflies, and now bees for the NSF-funded iDigiBees project. In her 17 years as a volunteer, Jan expects that she has catalogued around 65,000 specimens. When not dedicating time to the museum, Jan participates in the boards of charities in her community in Estes Park. She uses her masters in computer information management to support the work that she does as secretary and treasurer on the boards of the Elizabeth Guild Thrift Shop, which donates proceeds to the Estes Park Hospital, and the Crossroads Ministry board, which

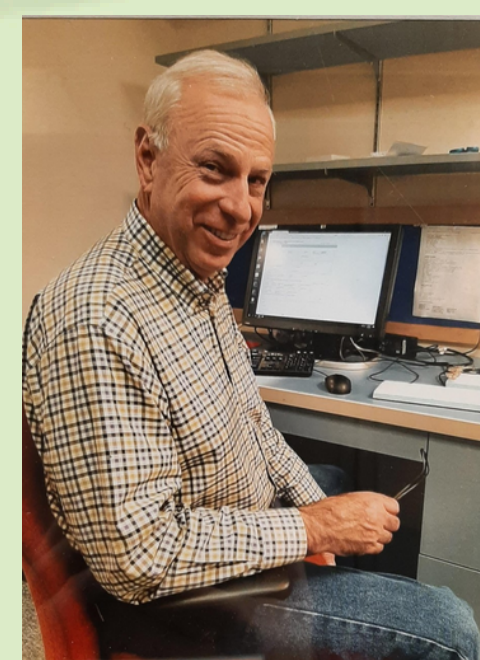
supports the local community.

This includes assisting with housing, energy bills, and – especially in the recent SNAP cuts – providing meals for those in need. As the iDigiBees project finishes, Jan plans to continue on with the Museum in any position where help is needed.

Greg Penkowsky, a retired lawyer who worked many years in Denver, enjoys volunteering for the Montana Moth Project in his retirement. Greg was invited to the museum by Paul and Evi Oppler in 2020 and began volunteering shortly after. In retirement, Greg has invested his time both in the museum and in ecologically managing Douglas fir and ponderosa pine forests on his property near Golden. Greg has felled thousands of trees in an effort to manage the overgrown forests on his land; this is in line with his project under The Bird Conservancy of the Rockies: Forestry for the Birds. Beyond birds, Greg's forestry project has supported the ecology of Colorado as well as entomology; Greg allows CSU classes to visit his land, providing a valuable opportunity for collection and study of arthropods in Colorado. Hands-on field experience helps to prepare students for future work and increases the knowledge of insects in the state of Colorado.



Jan Kilgore



Greg Penkowsky

Giving Thanks!!

The C.P. Gillette Museum of Arthropod Diversity strives to be an institution to foster stewardship of invertebrates through conservation, research, and education. The accomplishments and breakthroughs in the Museum could not have occurred without the support of dedicated staff, associates, donors, and volunteers. This newsletter served to highlight such accomplishments, and looks forward to another fruitful and collaborative year!

Staff

Dr. Marek Borowiec | Chuck Harp | Stephanie Eskew | Dr. Todd Gilligan |
Tim McNary, M.S. | Dr. Boyce Drummond | Vilas Brown

Associates

Dr. Deane M. Bowers | Dr. John W. Brown | Dr. Paula E. Cushing | Dr.
Frank T. Krell | Dr. Will K. Reeves | Dr. Andrew D. Warren | Matthew
Seindensticker

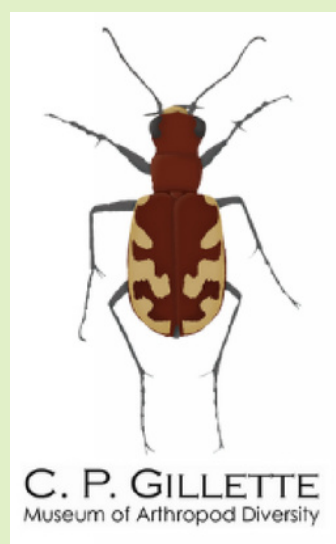
Donors

Dennis Bruner | Mat Seindensticker and Northern Rockies Research and
Education Services | Greg Penkowsky | Pam Piombino
Kelly Richers | John Nordin | Paul Opler

And a Special Thanks to the Incredibly Dedicated Team of Volunteer!

Jan Kilgore | Christina Douglas | Christina Nimmo | Donna Johnson |
Olivia Lucas | Scott Ellis | Thomas Schultz | and many more

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