BoilerBug: A networked science collaboration between the Purdue Entomological Research Collection and the Logansport Juvenile Correctional Facility
Purdue Entomological Research Collection (PERC)

Outline

▪ Location
▪ Holdings
▪ Digitization
▪ BoilerBug
▪ Progress

Smith Hall, Purdue University
West Lafayette, IN, USA
Purdue Entomological Research Collection

- Smith Hall, East Basement PU
- 1,230 sq. ft.
- 95 cabinets, 24 drawers each
- 24 cabinets, wet collections
- Largest, most important collection of insects in Indiana
- World class mayfly collection
- Repository for IDNR, USDA, Indiana CAPS, other projects

PERC compactor system
Purdue Entomological Research Collection

Specimen Holdings
- ~.5 million pinned specimens
- ~70,000 vials
- ~3,700 types
- ~28,000 slide-mounted specimens
- ~11,000 papered specimens
PERC Data Transcription Challenges

- Task analysis
- Operating costs
- Space constraints
- Equipment
- Time limitations

PERC undergraduate curatorial assistants
Accelerating PERC Data Transcription

- Fund-raising
- Refurbished equipment
- Space requests
- Advanced HTP imaging
  + Citizen science = ???
Logansport Juvenile Correctional Facility

- Established in 1994
- Security level: low-high
- Average daily population: 147
- Students committed by Indiana courts
- All males, 12-18 years of age
PERC + LJCF = BoilerBug Project

- Classrooms (science, English, math, art, social studies, college prep, telecom, intro to construction, interpersonal relationships)
- 5 data transcription workstations
- 5 students
- 1 class period 5 days/week
- 3 training session/year
- Data transfer (HD)
- Quality check
- Upload to PERC database
- Certificate
PhD. student Crystal Klem training LJCF students; 30 youth participants trained thus far.
BoilerBug Phase II: Implementation
BoilerBug Phase III: Quality Control

- “Click and drag” errors, deleting images
- Entering the same label data in multiple fields
- Incomplete data entry
Broader Impacts

- Research indicates that there is a human benefit to being exposed or connected to nature
- LJCF students receive IT training from Purdue faculty, staff and students
- LJCF students gain a better understanding of insects and their impact on our world
- Team building, problem solving skills development
- Responsible for documenting important data
- A model that can be applied to other facilities
“I think the BoilerBug Project helps occupy time and really keeps people’s focus compared to getting in trouble. I personally enjoyed it. (It’s difficult at first but when you get the hang of it it’s kind of fun!” – Student

“I’ve found the Boiler Bug Project to be an interesting challenge for many students. Those selected participate in a Purdue project, contribute to a worldwide data resource, and earn a certificate of participation from the university. A great source of enthusiasm and a rare experience!” – Jeff Merrell, Teacher, LJCF
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