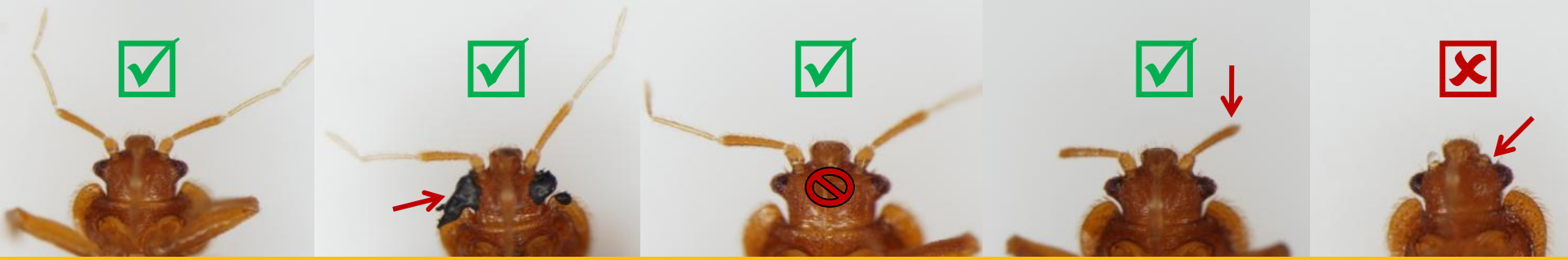


US EPA ARCHIVE DOCUMENT



State of Bed Bug Knowledge and Research Needs

Coordinating and Collaborating

Dr. Stephen A. Kells

Presented at the
Second National Bed Bug Summit
February 1, 2011



Presentation Outline

1. Early Collaborations
2. NC Temp 500 Research Group
3. Priorities Discussion in Progress

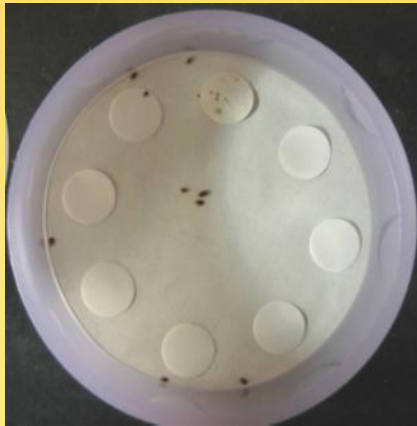
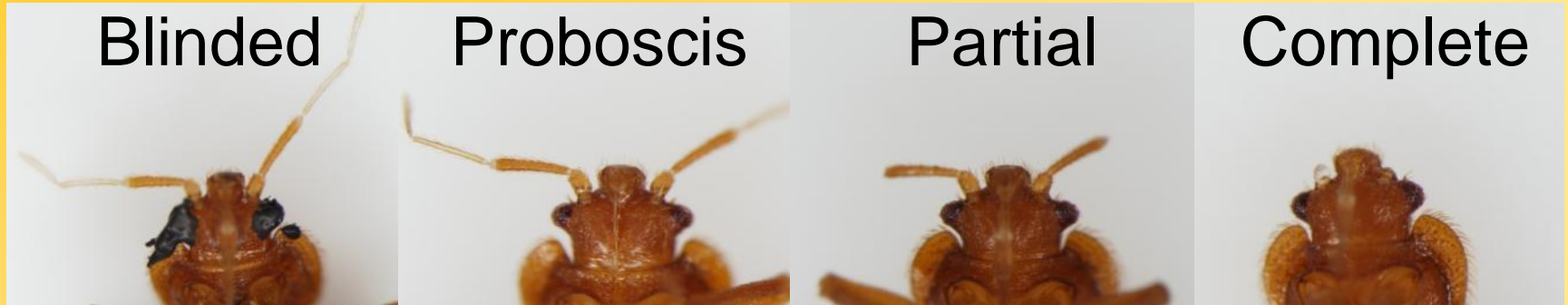
Early Collaborations

*While field populations have increased,
lab populations have
sometimes crashed!*



Industry and Academia Collaborations

Example: Bed Bug Aggregation Behavior



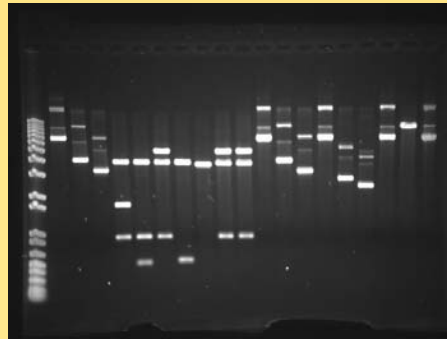
“NC Temp 500” Research Group

Acknowledgement: Dr. Kurt Saltzmann, Purdue

A Promoter for Coordination and Collaboration

Takes advantage of :

- Regional similarities and differences
- Different research skills
- Information efficiency



Examples of USDA Research Working Groups

Success With Other Issues:

- NC Soybean Research Program
- Honey Bee Colony Collapse Disorder
- Grain Quality / Marketing (NC-213)
- *And many more.....*

NC Temp 500 for Bed Bugs

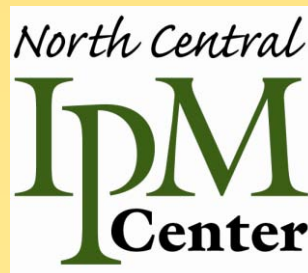
Objectives:

- Organize Research and Extension Specialists studying bed bugs.
- Develop a report of knowledge gaps and priorities for collaborative research, and a database of educational resources.
- Begin assembling specific groups to prepare proposals addressing knowledge gaps.

Initial Priorities Meeting

- 28 Participants
 - 18 Researchers / Extension Specialists
 - 14 Universities
 - 6 Federal Gov't Stakeholders
 - USDA, EPA, Dept. of Defense
 - 4 Industry Stakeholders
 - National Pest Management Association
 - ICR Labs

Funding Source:



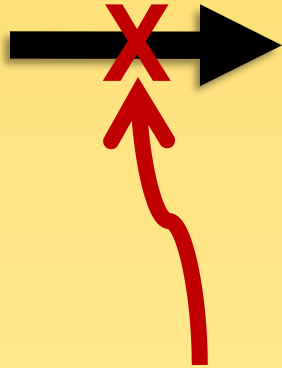
Synopsis

Main Areas of Emphasis

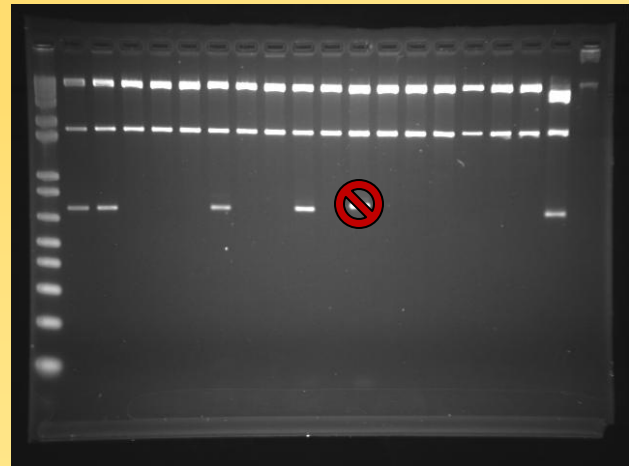
- Basic Research
- IPM Management Tools
- Efficacy of Treatment Methods
- Epidemiology and Pathway Analysis
- Health and Economic Impacts
- Education

Basic Research

- The Bed Bug Genome
 - Are there new targets for control?



Compound A



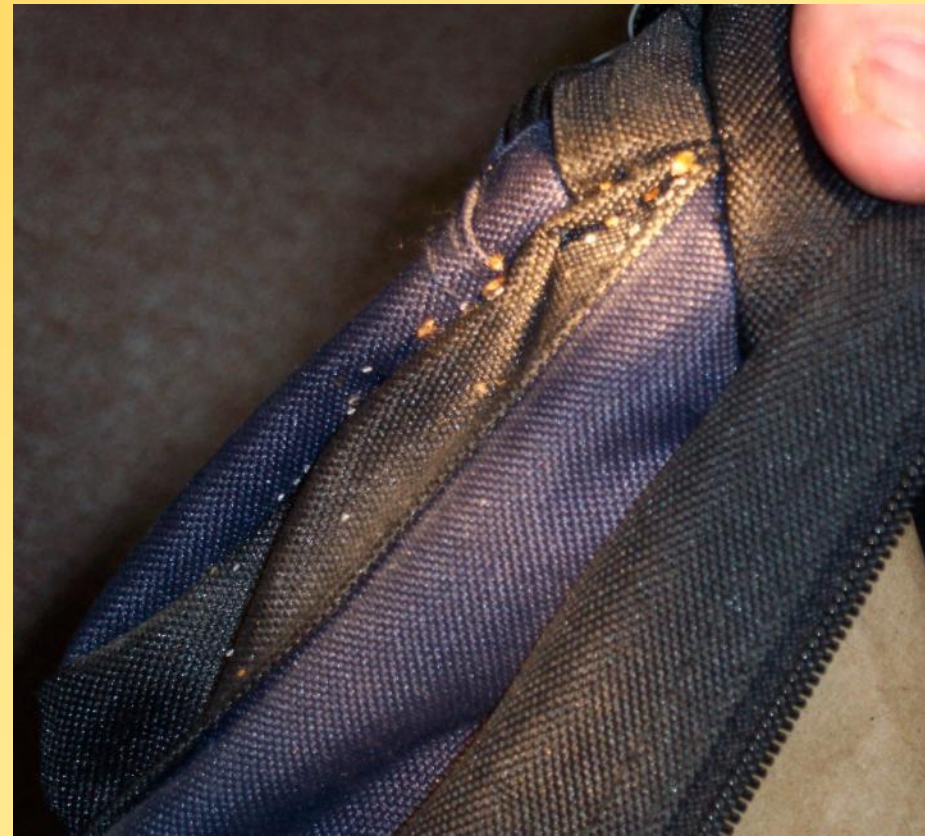
IPM Management Tools

- Improving detection measures
- Making the infestations predictable
- Improving treatment techniques
- Developing IPM programs



Epidemiology and Pathway Analysis

- “A systemic pest within society”
- How do we begin to address infestations based on **reservoir** and **transitional** populations?



Health Impacts

- Not a vector of disease, a nuisance
- What are the impacts on people coping with infestations
 - and others who are societally connected?
- **Need to establish baselines
and priorities**

Economic Impacts

- Estimated cost of heat treatments
in Minnesota: **\$ 9 million / year**
- Cost of other treatments?
- Cost of not effectively treating?
- **Establishing baselines
and priorities**

Tenant tries to kill bed bugs, starts fire

Posted by [Kellie Geist-May](#) • 01/24/11, 10:07 am • [Recommend](#) 1

By Kellie Geist-May • kmay@communitypress.com

Union Township firefighters responded to an apartment complex in Union Township where a tenant tried to kill bedbugs with rubbing alcohol.

The call came at around 5 p.m. Friday, Jan. 21, from 505 Old Ohio

"The occupant was trying to self-exterminate bed bugs and was spraying rubbing alcohol while smoking a cigarette," Fire Chief Stan Deimling said.

Education

- Much information is available,
but it is not effectively deployed
- There is a need for targeted education and
an ability to test effectiveness of adoption

NC Temp 500: Next Steps

Objectives:

- Organize Research and Extension Specialists studying bed bugs.
- Develop a report of knowledge gaps and priorities for collaborative research, and a database of educational resources.
- Begin assembling specific groups to prepare proposals addressing knowledge gaps.

Thank you!

www.bedbugs.umn.edu

Collaborators and Co-workers

Joelle Olson

Corey McQueen

Marc Eaton

Dr. Kurt Saltzmann, Purdue

Dr. Roger Moon, U.Mn

NC Temp 500 Collaborators

Research and Extension Support



MnPMA

BASF

MGK

EcoLab