

BED BUG DETECTING DOGS

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INSPECTION ---FIRST ELEMENT OF TREATMENT

- **PROBABLY MOST DIFFICULT
ELEMENT**
- **MOST TIME CONSUMING**
- **MUST BE ACCURATE**

BED BUG DETECTION

- **Visual detection difficult**
- **Early infestations go unnoticed**
- **Early control more likely to succeed, and these infestations are less likely to spread and are cheaper to control**



15 bed bug nymphs in slots of drywall screw

BED BUG INFESTATIONS

- **Active**
 - Live bed bugs
 - Eggs
- **Inactive**
 - Dead bed bugs
 - Blood spots
 - Fecal stains
 - Cast skins



INITIAL INSPECTION

– **SEARCHING FOR
ANY INDICATION
OF INFESTATION**

- **LIVE INSECTS**
- **CAST SKINS**
- **BLOOD SPOTS**



POST TREATMENT INSPECTION

- **MORE DIFFICULT INSPECTION**
 - **MUST LOOK FOR LIVE INSECTS AND EGGS**
 - **MUST SEARCH FURTHER AWAY FROM BED**

WHERE TO LOOK



Secondary
Bed Bug
Harborages

~23%

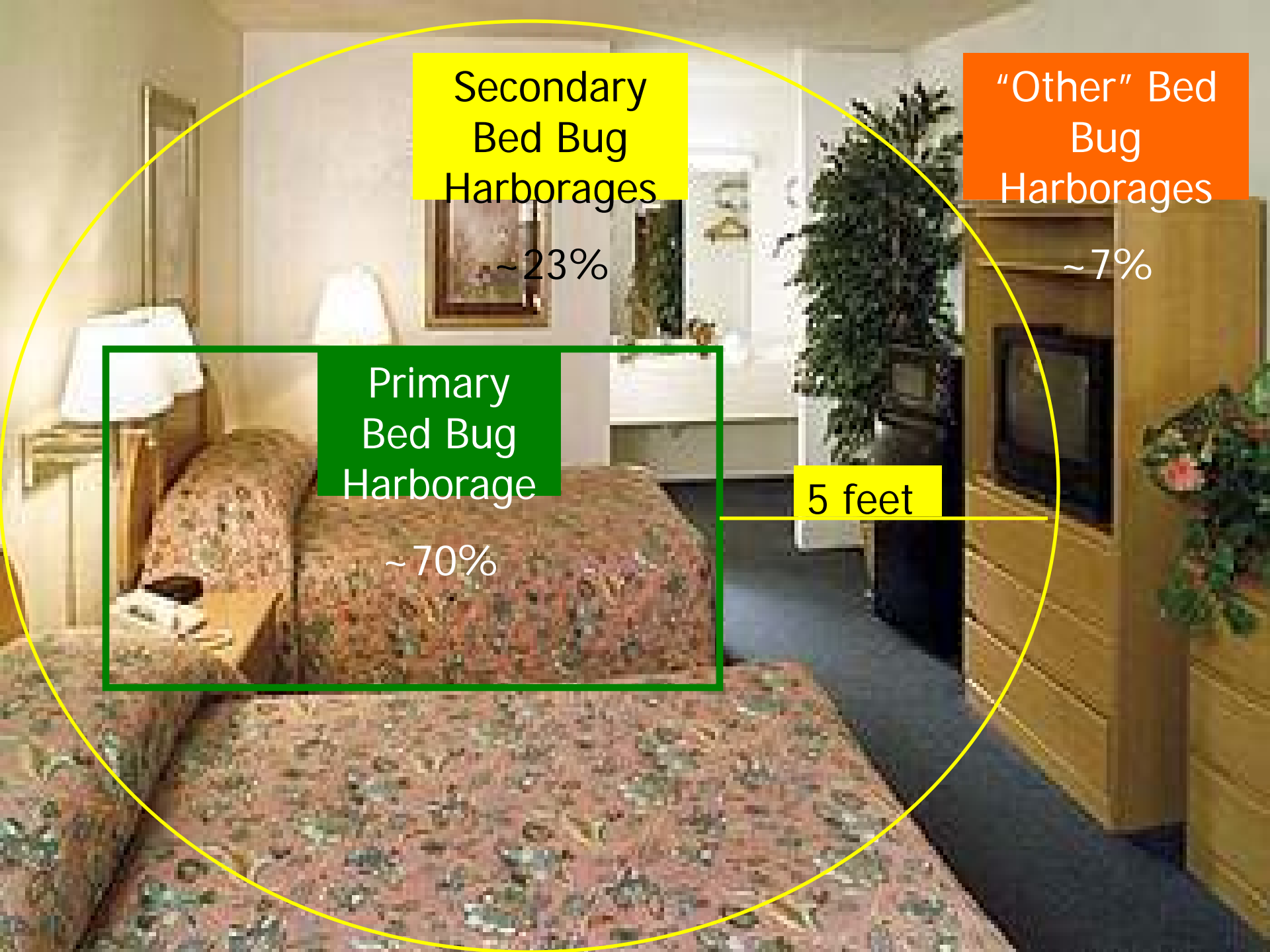
"Other" Bed
Bug
Harborages

~7%

Primary
Bed Bug
Harborage

~70%

5 feet



Possible Primary Harborage



Linens and dust ruffles



Headboards and wall mounts



Secondary
Bed Bug
Harborages

~23%

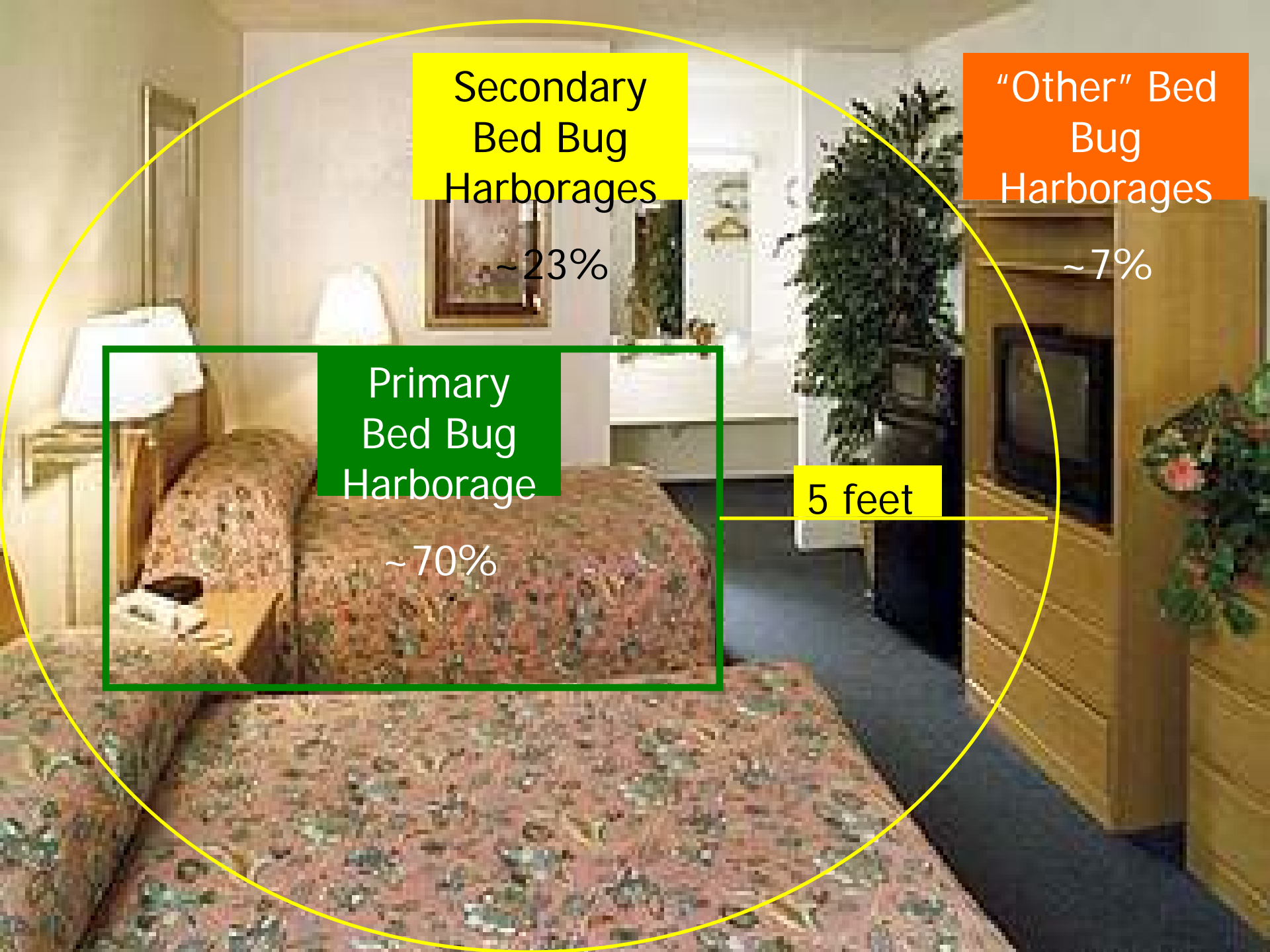
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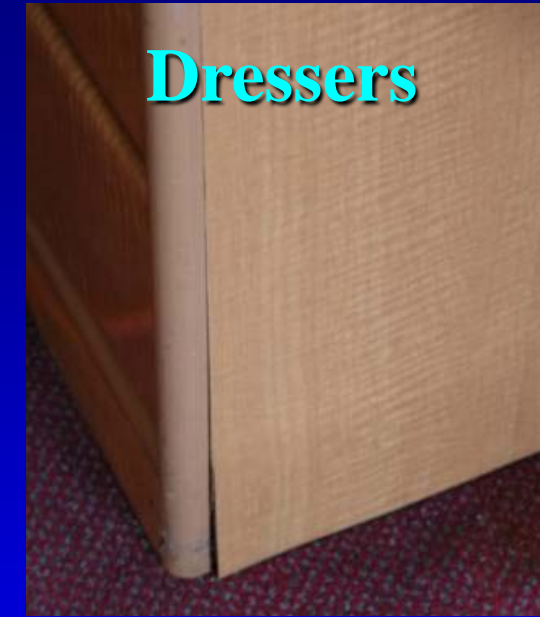


Possible Secondary Harborage

Night stands



Dressers



Tables



Chairs



Carpet and baseboards



Secondary
Bed Bug
Harborages

~23%

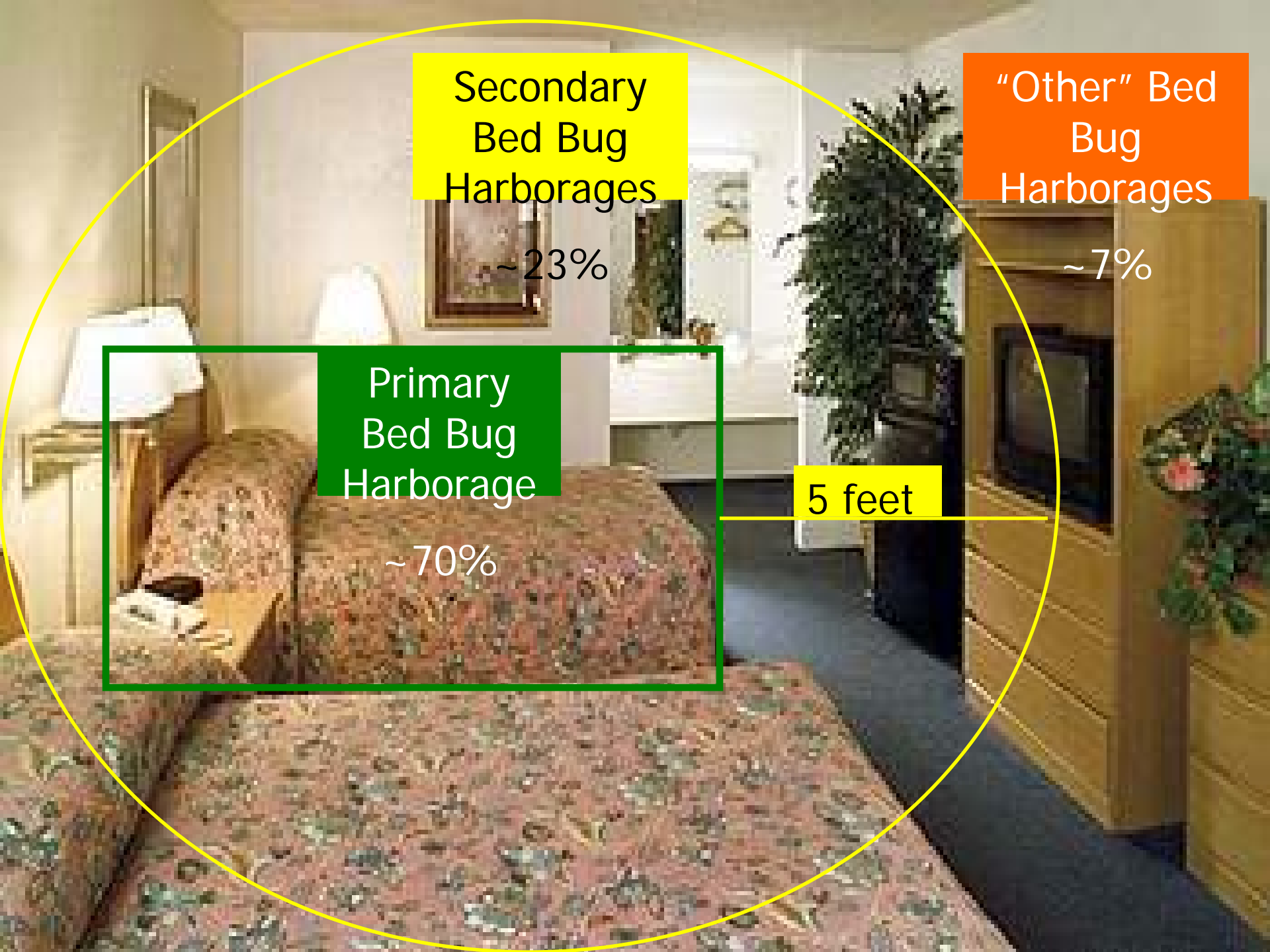
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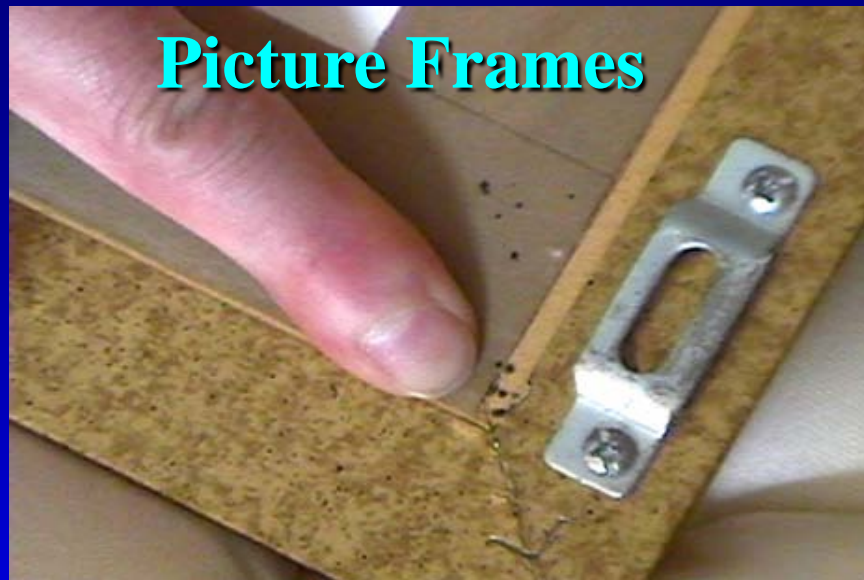


Other Harborage

Smoke detectors



Picture Frames



Wall outlets



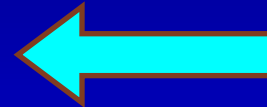
Popcorn Ceilings



Anywhere !

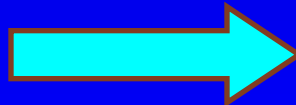


A PROPER INSPECTION



Before

After



INSPECTION CHALLENGES







HOW LONG DOES IT TAKE

ESTIMATES OF TIME REQUIRED

HOW ACCURATE IS THE INSPECTION

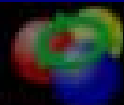
**ESTIMATE THE PERCENTAGE
OF ACCURACY**

CAN MAN'S BEST FRIEND HELP



BED BUG DETECTING DOGS

- **COULD BE THE FUTURE OF INSPECTIONS**
- **MUCH QUICKER**
- **SIGNIFICANTLY MORE ACCURATE**



UNREGI
STERED

"Don't Let The Best Pages Bite"

HOW ARE DOGS CHOSEN

- **SPECIFIC BREEDS ARE FAVORED**
 - BEAGLE
 - HUNTING BREEDS
- **MOST DOGS ARE RESCUED**
- **DOG'S TRAITS ARE EVALUATED**



METHODS OF TRAINING

- **STIMULUS IS NORMALLY FOOD**
- **REPITION IS IMPORTANT**
- **PRAISE NOT PUNISH**



TRAINING STEPS

Basic Retrieve



Controlled Retrieve



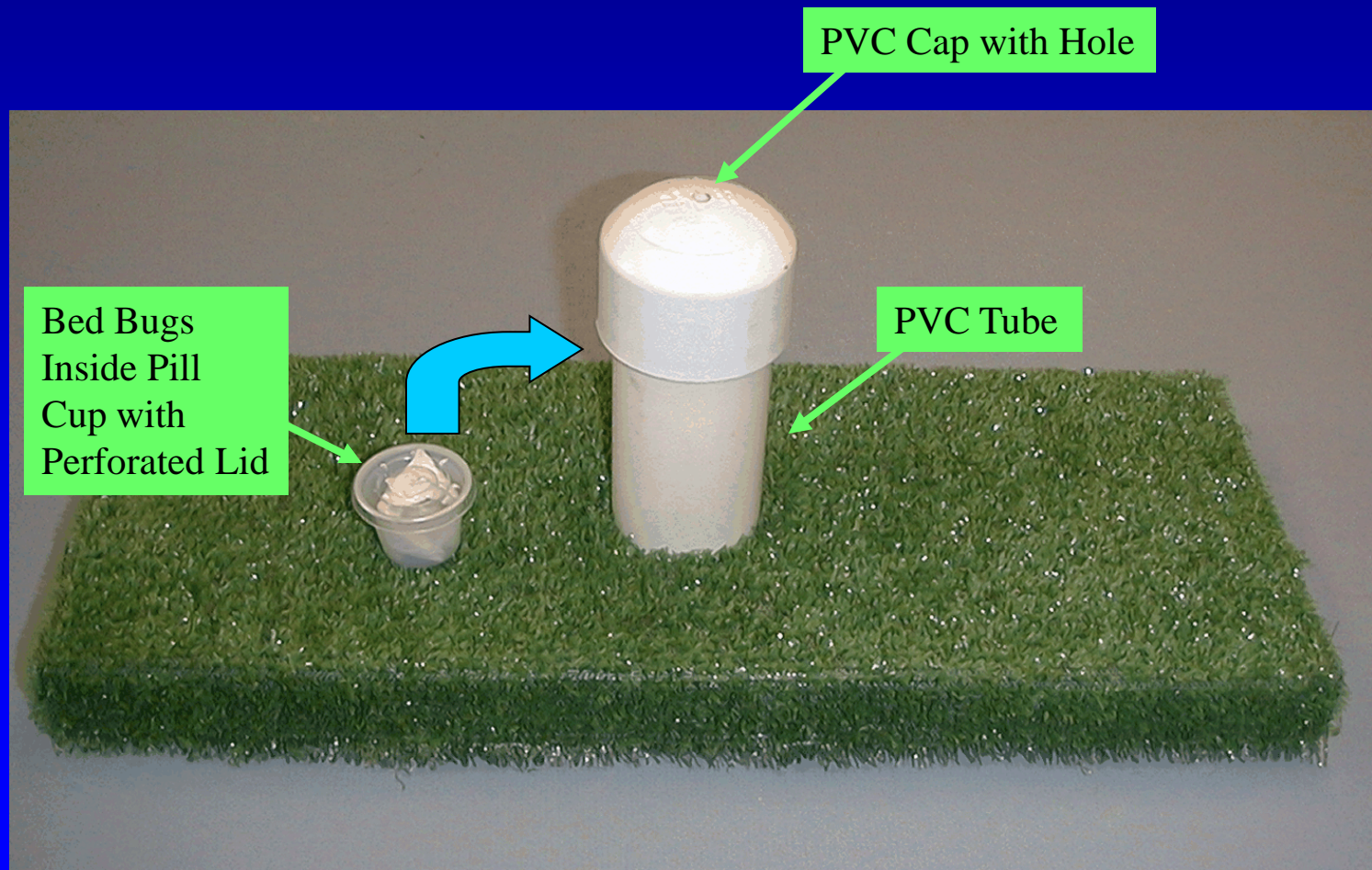
Buried Hides



Food Reward



STATION FOR EVALUATING CANINE SCENT DETECTION







EVALUATIONS

- **ARE DESIGNED TO EVALUATE THE DOG AND HANDLER**
- **ARE REAL SITUATIONAL TESTS**
- **VALIDATE THE DOGS ABILITY**

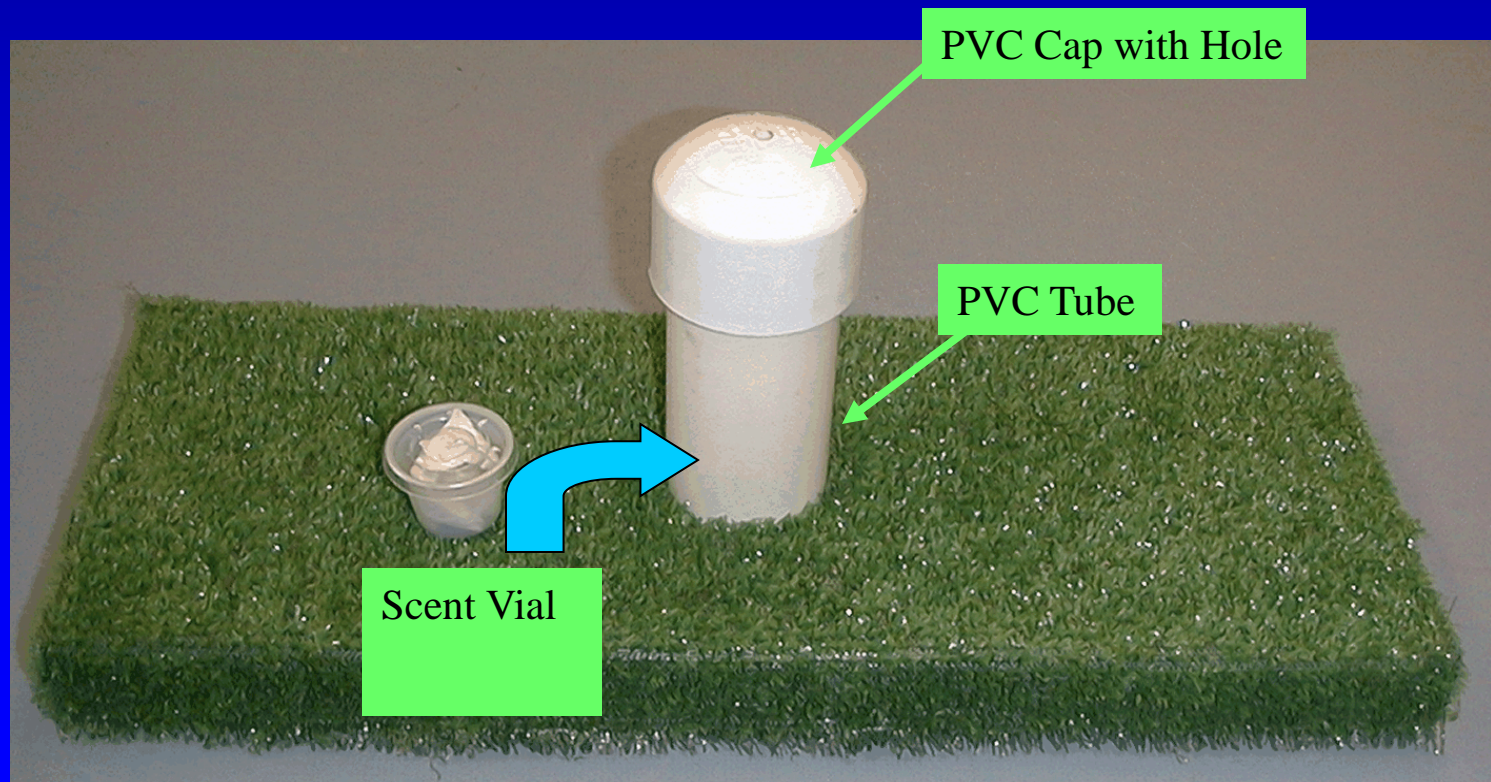
MATERIALS AND METHODS

- Scent Vials



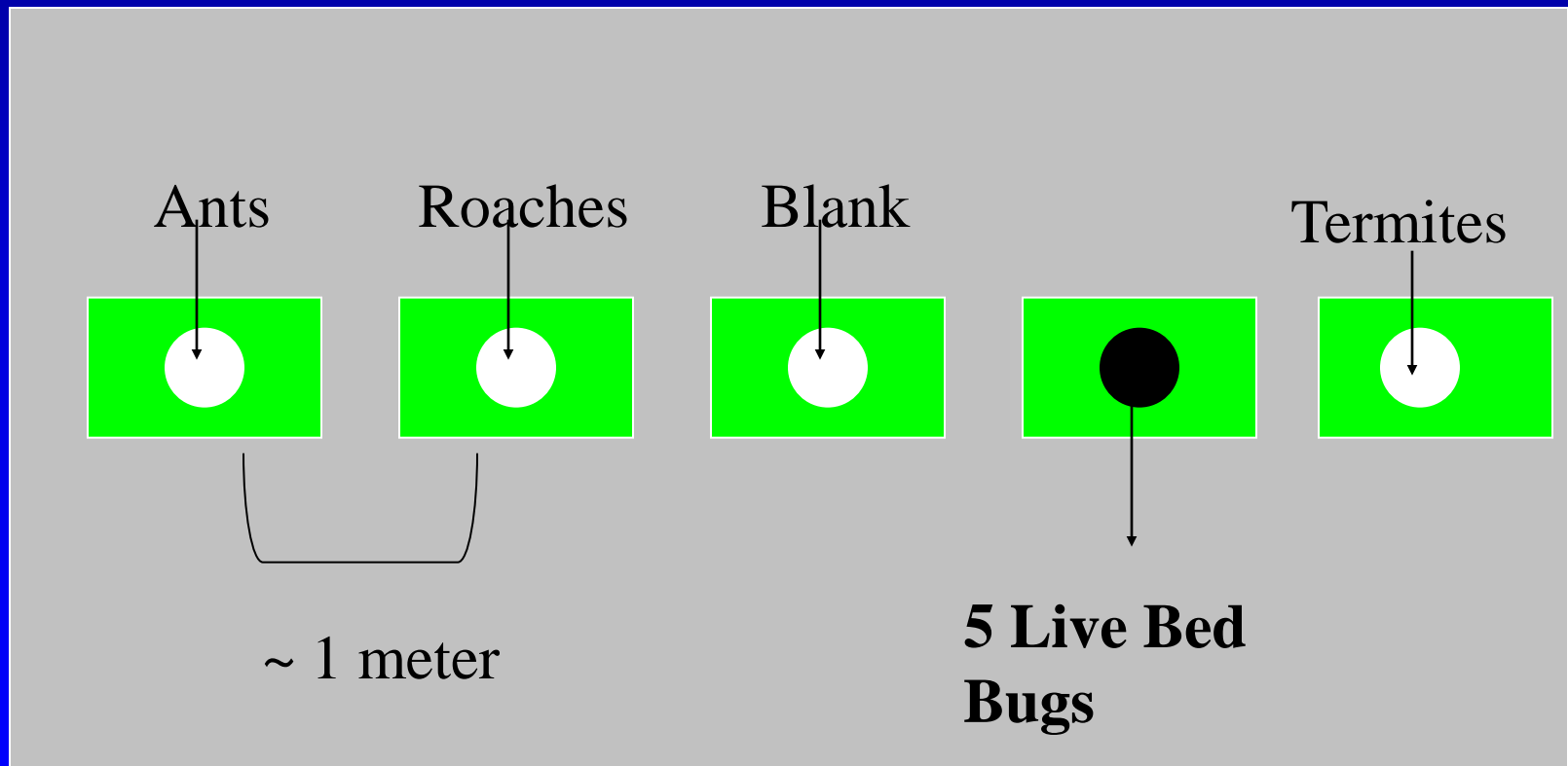
MATERIALS AND METHODS

- Scent-detection stations



GENERAL HOUSEHOLD PEST TESTS

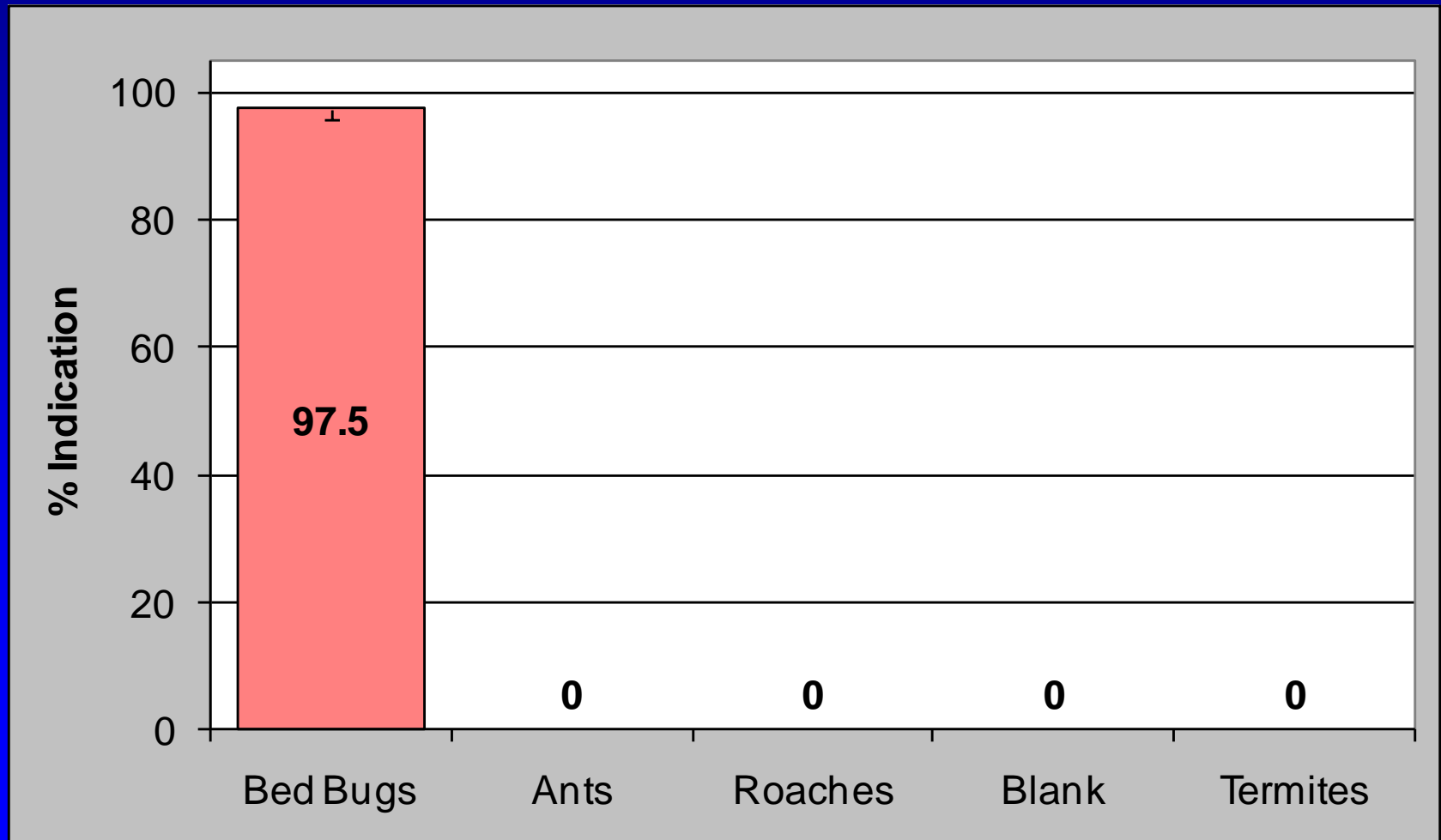
- 4 dogs, 20 replicates per dog



BED BUG DETECTING CANINE

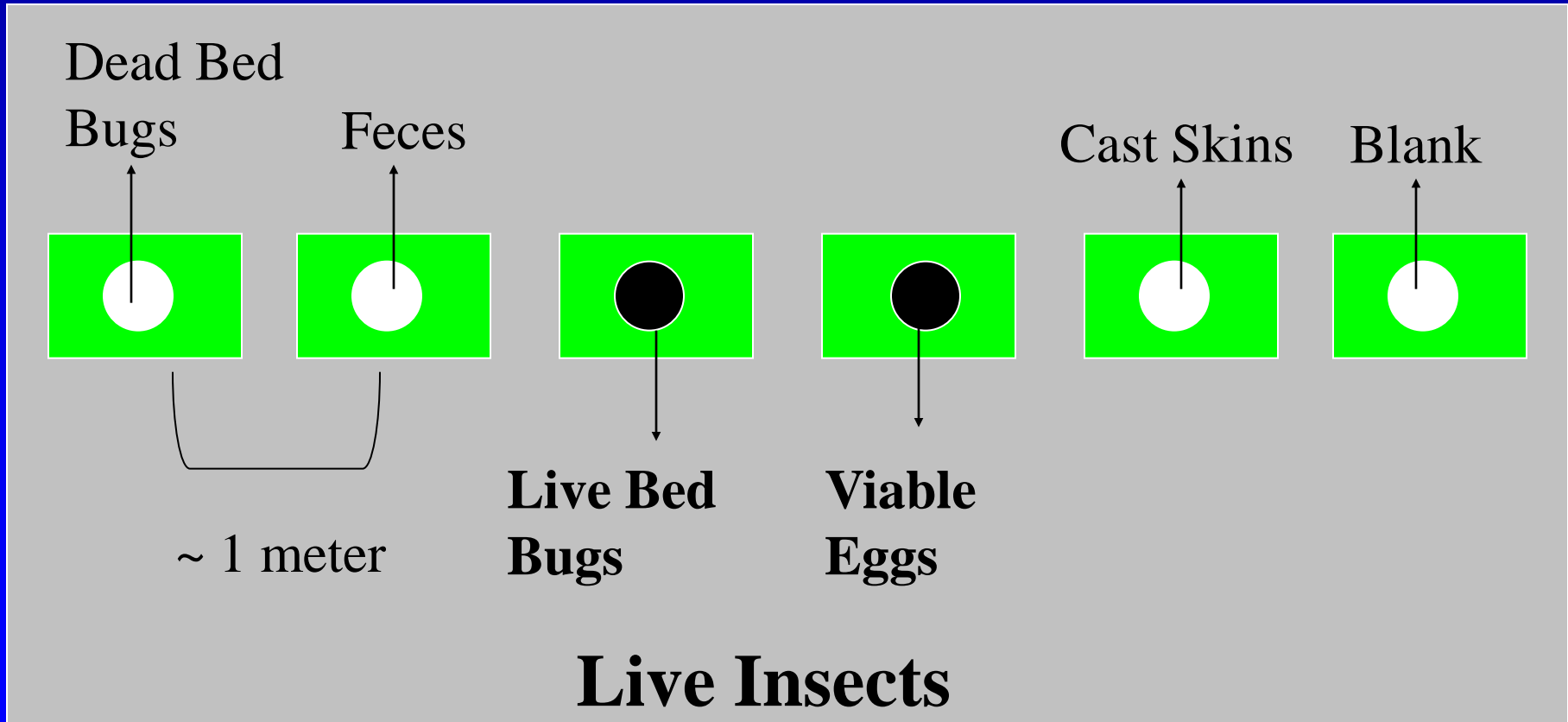
BED BUG DETECTING CANINES IN ACTION

RESULTS OF HOUSEHOLD PESTS TEST

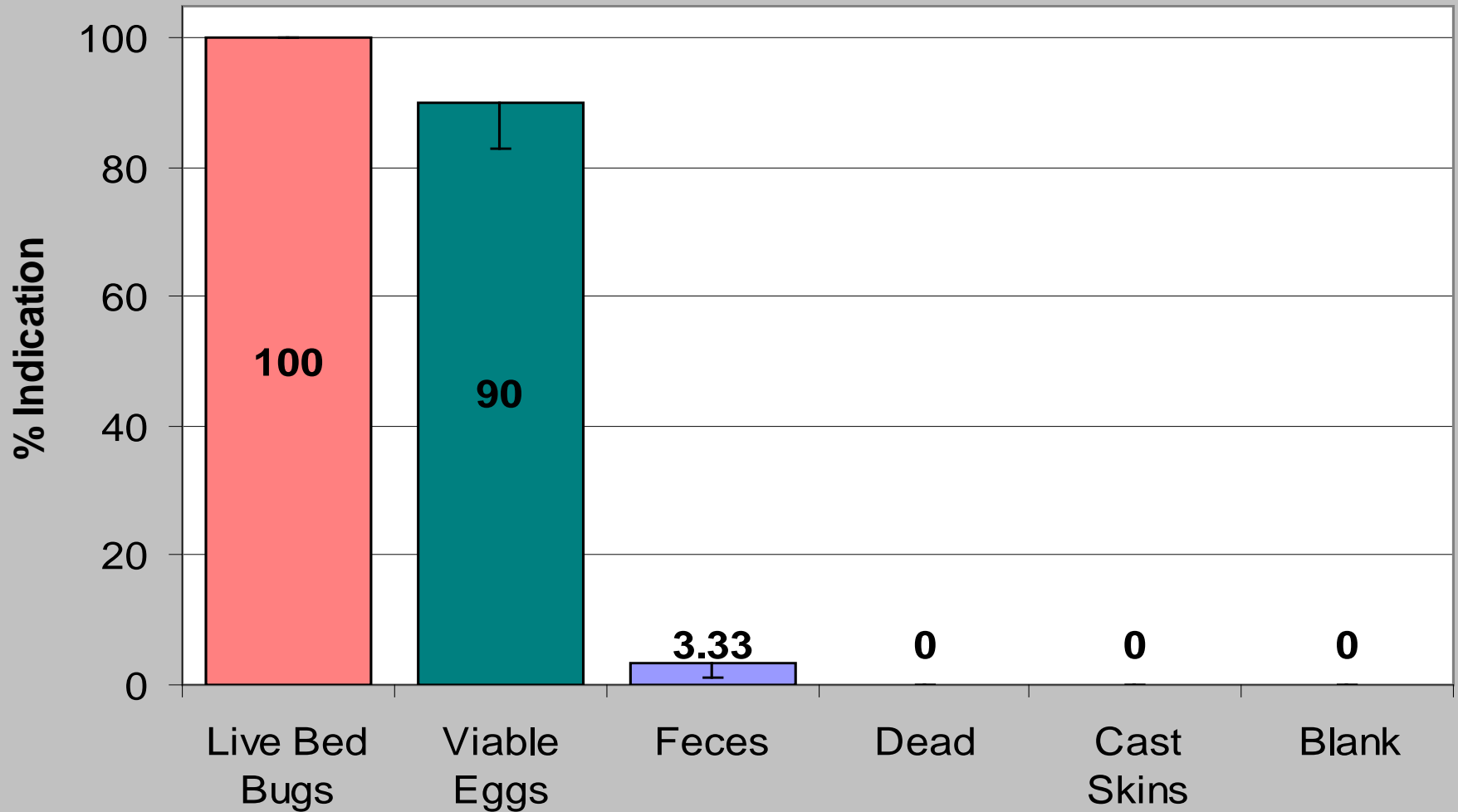


BED BUG MATERIALS TEST

- 3 dogs, 20 replicates per dog

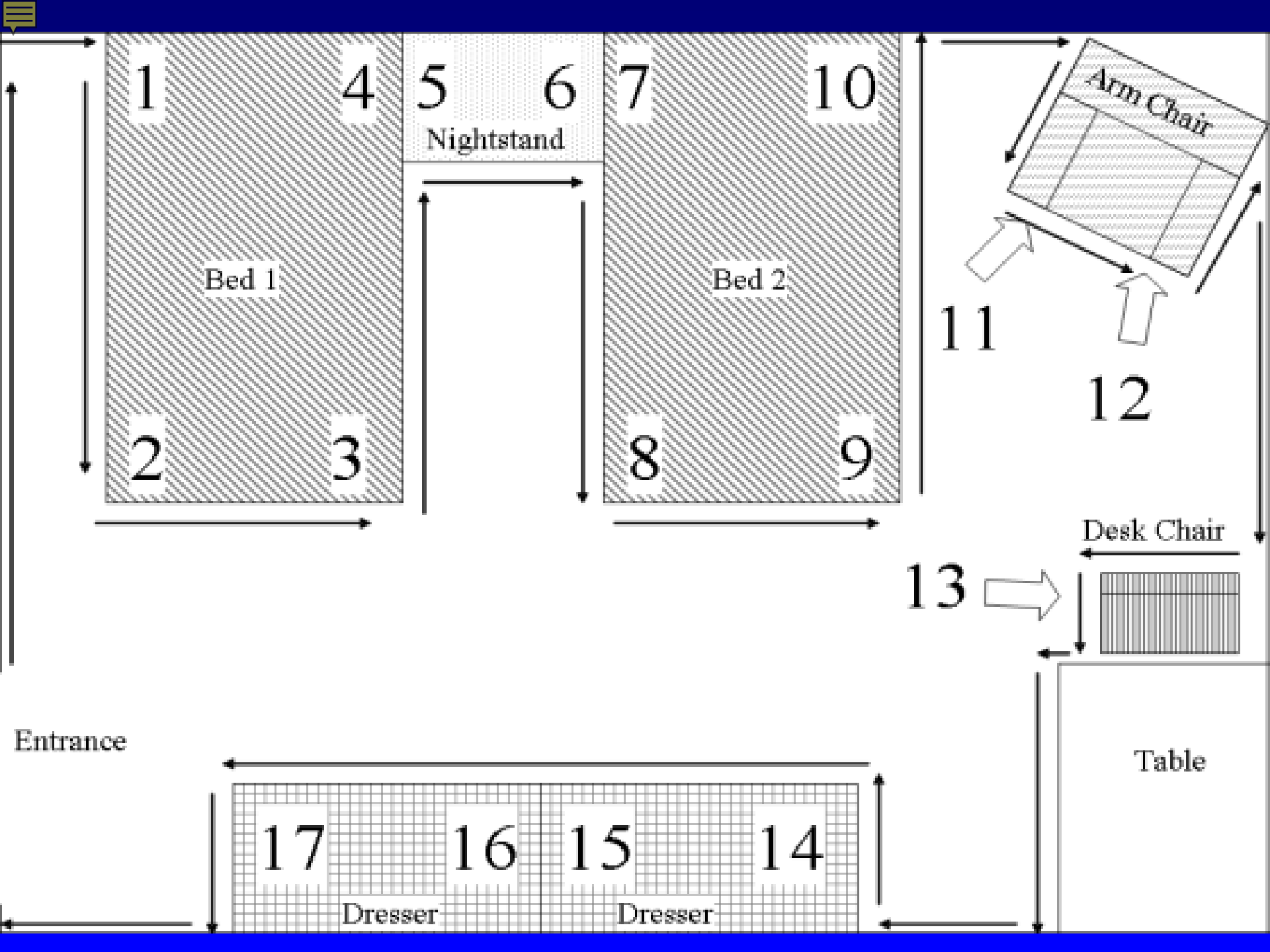


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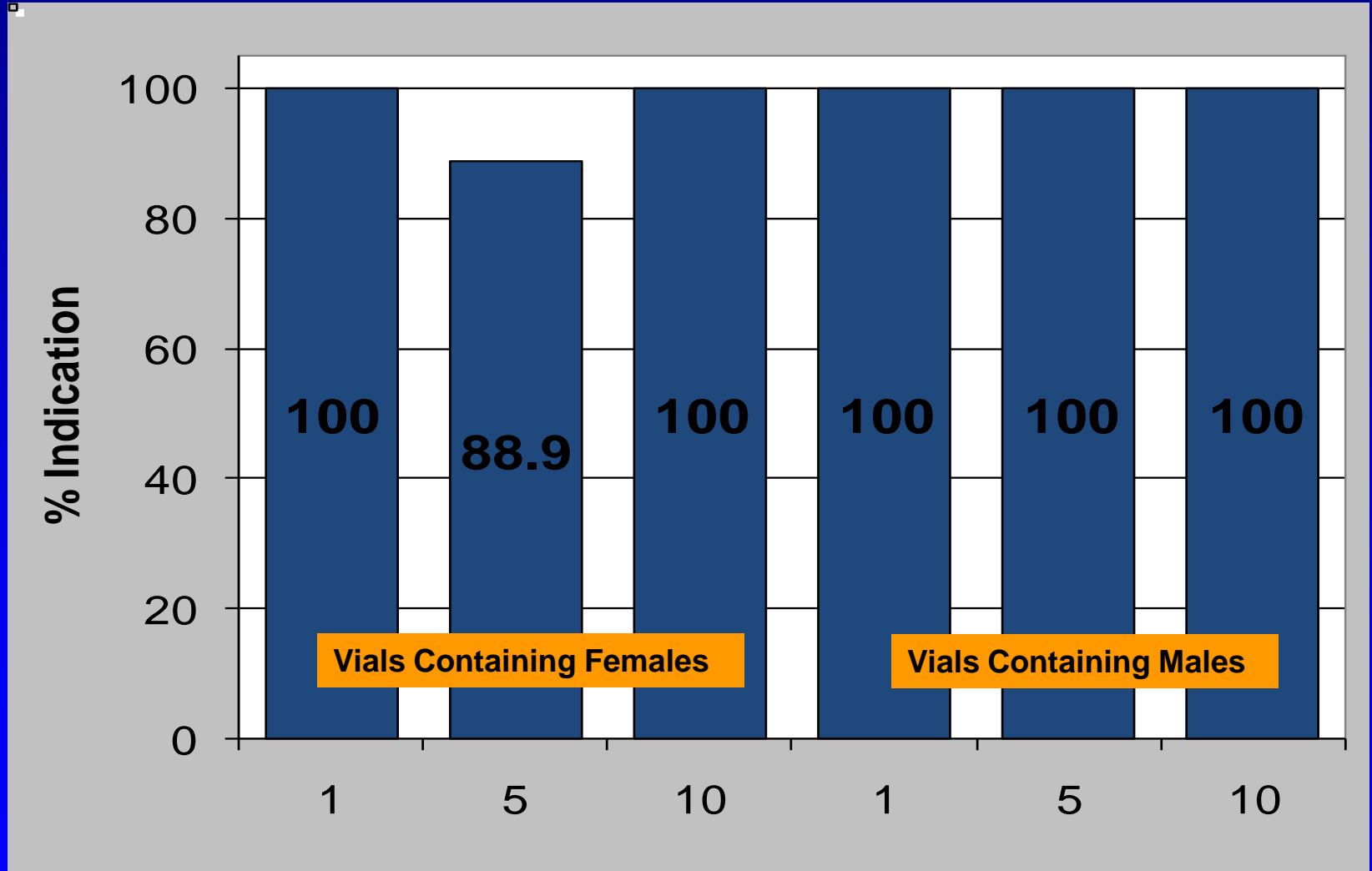


HOTEL FIELD TESTS

- **3 vials male adults only- 1, 5, and 10**
- **3 vials female adults only- 1, 5, and 10**
- **2 hotel rooms:**
 - **One with only female vials**
 - **One with only male vials**
- **Randomly hidden in 17 possible locations**
- **3 dogs, 6 replicates per dog**



ABILITY TO LOCATE BED BUGS IN HOTEL ROOMS





CONCLUSIONS

- **Dogs can be trained to detect the scent of bed bugs**
- **Dogs differentiated**
 - **Bed bugs from other household pests**
 - **Active from inactive infestations**
- **Determined that dogs could locate bed bugs in hotel rooms**

WHO USES BED BUG DETECTING DOGS

- **Currently two public housing authorities own dogs and many more hire them**
- **Many colleges and universities are hiring them**
- **Hotels and other hospitality organizations are hiring them**

CHOOSING A BED BUG DETECTING TEAM

- **LOOK FOR CERTIFICATIONS**
- **ASK FOR REFERENCES**
- **CHECK OUT WHERE THE DOG WAS TRAINED**

CERTIFICATION

- **NESDCA – National Entomology Scent Detection Canine Association**
- **Very rigorous testing process**
- **Annual recertification required**

MEET JUMPING JACK FLASH



BED BUG DETECTING DOGS LIMITATIONS

- **CAN NOT SEARCH UP HIGH**
- **WORK BEST WHEN PAIRED WITH
SAME HANDLER**
- **NEED REINFORCEMENT TRAINING
ALMOST DAILY**

SUMMARY

- **INSPECTIONS ARE AS CHALLENGING AS TREATMENTS**
- **BED BUG DOGS ARE PROVEN TO BE MORE ACCURATE AND QUICKER**
- **THEY MAY BE THE INSPECTOR OF THE FUTURE**

WEBSITES

- <http://ipm.ifas.ufl.edu>
- www.nesdca.com
- www.bedbugcentral.com
- www.thebedbugresource.com

SLEEP TIGHT, LLC

Canine Bed Bug Detection Service

- **Gretta MacIntyre - Pennsylvania**

Phone: 724-986-7946

GRETTA@SLEEPTIGHTLLC.BIZ

- **Linda Charlton - Ohio**

Phone: 513-520-5790

LINDA@SLEEPTIGHTLLC.BIZ

QUESTIONS

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- OFC PHONE 352-392-2171 EXT 10917
 - CELL PHONE 352-284-3963