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How effective are
stored product
moth traps?



Pheromones characterized (1950's)



Pheromones traps

Pest management devices



Pest monitoring devices

45 Different designs

- Conventional market traps vs. new designs
- Our new designs are playing around with:
 - different shaped traps
 - different size traps
 - different materials used to make a trap
- Provisional patent: February- 2002
- Formal patent: January- 2003

Anecdotal information

- Current market traps- 10-25%
 - Trap design?
 - Sticky substance?
 - Pheromone lure?
 - Location?

Influence of trap design and location on the capture of *Plodia interpunctella* (Indian Meal moth) (Lepidoptera: Pyralidae) in a release-recapture study

J. stored Prod. Res. 34(1):33-36
(Mullen et al., 1998)

- Mass trapping (36 traps in a warehouse)
- No indication of how a single trap performs
- Five different traps were used
- Location was a factor in trap catch
- ~72% of the males captured



PLANT
TREE
ACCOMMODATION

Personal Tray

© 2000 THE TREE COMPANY



Tues.



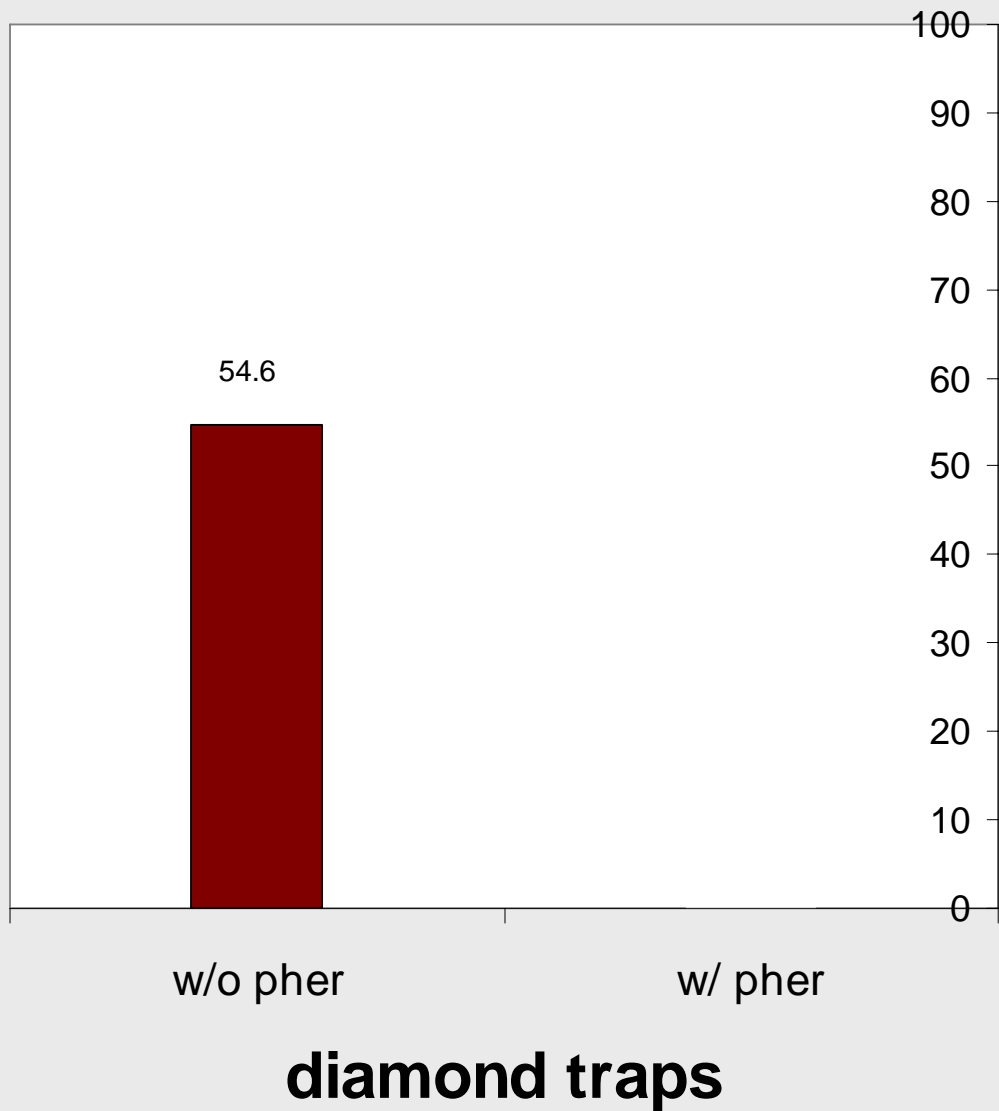
Mon.

Tues.

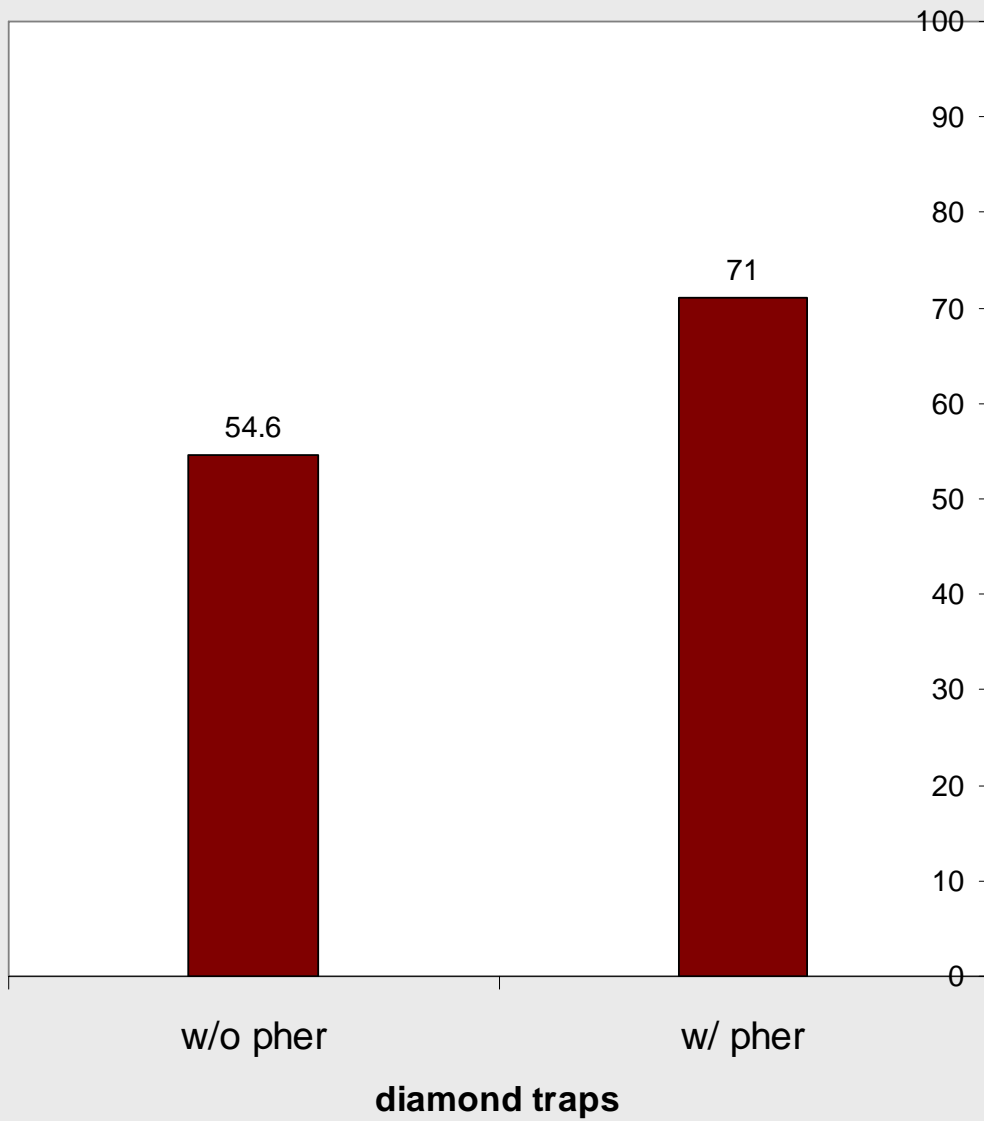
Wed.

Thurs.

Fri.



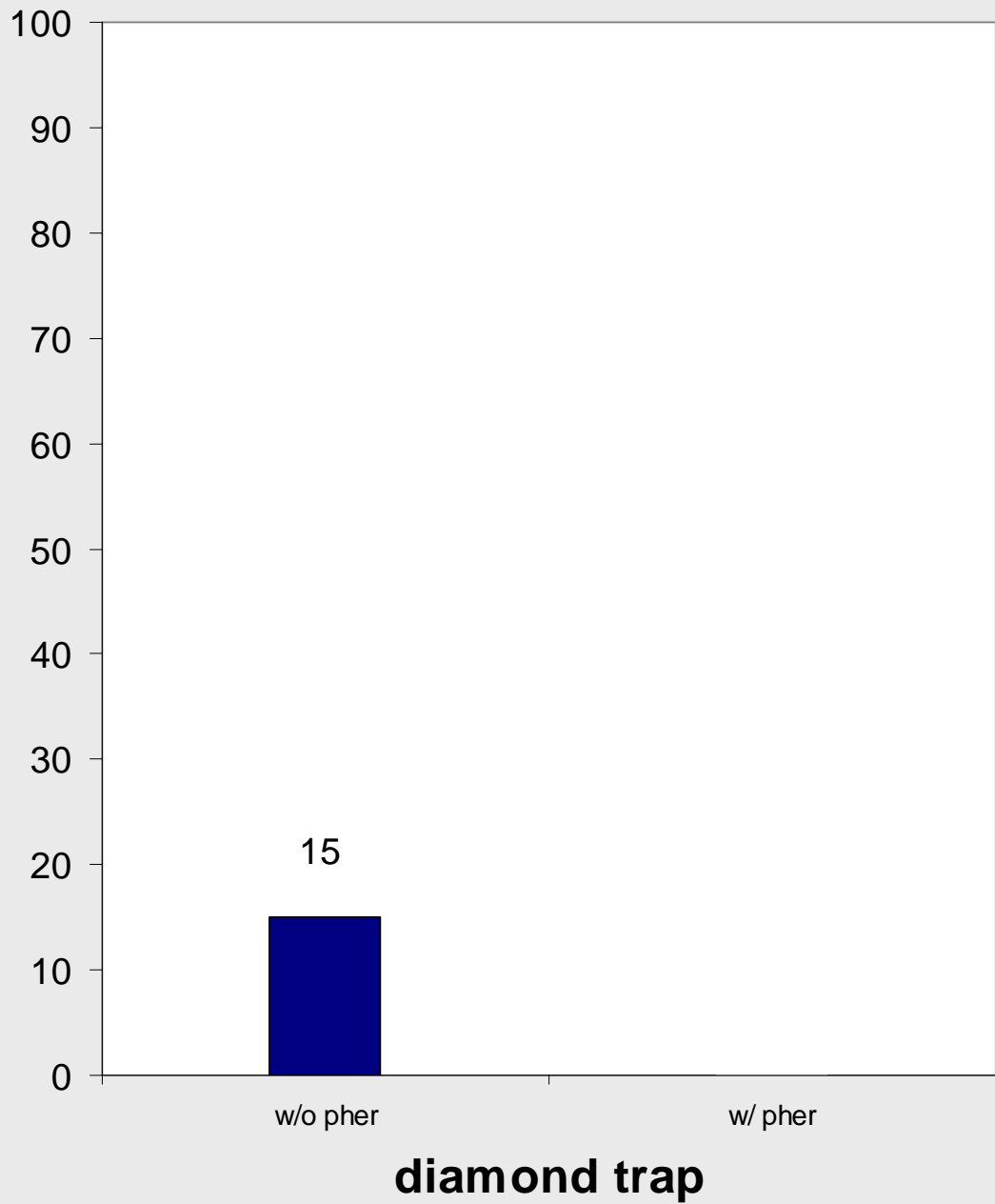
Over half the moths
caught without a
pheromone lure

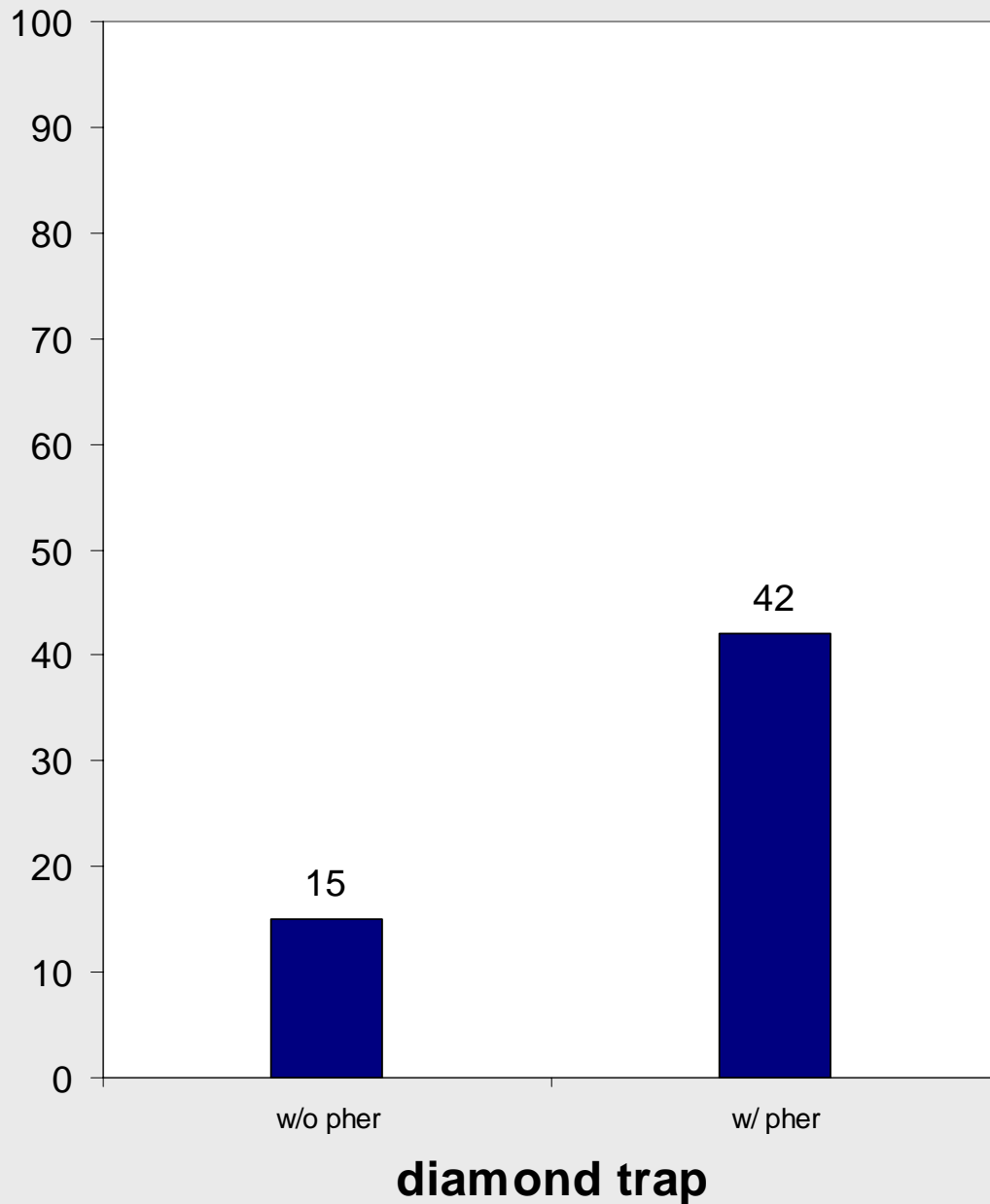


Difference =
16.4 percentage points



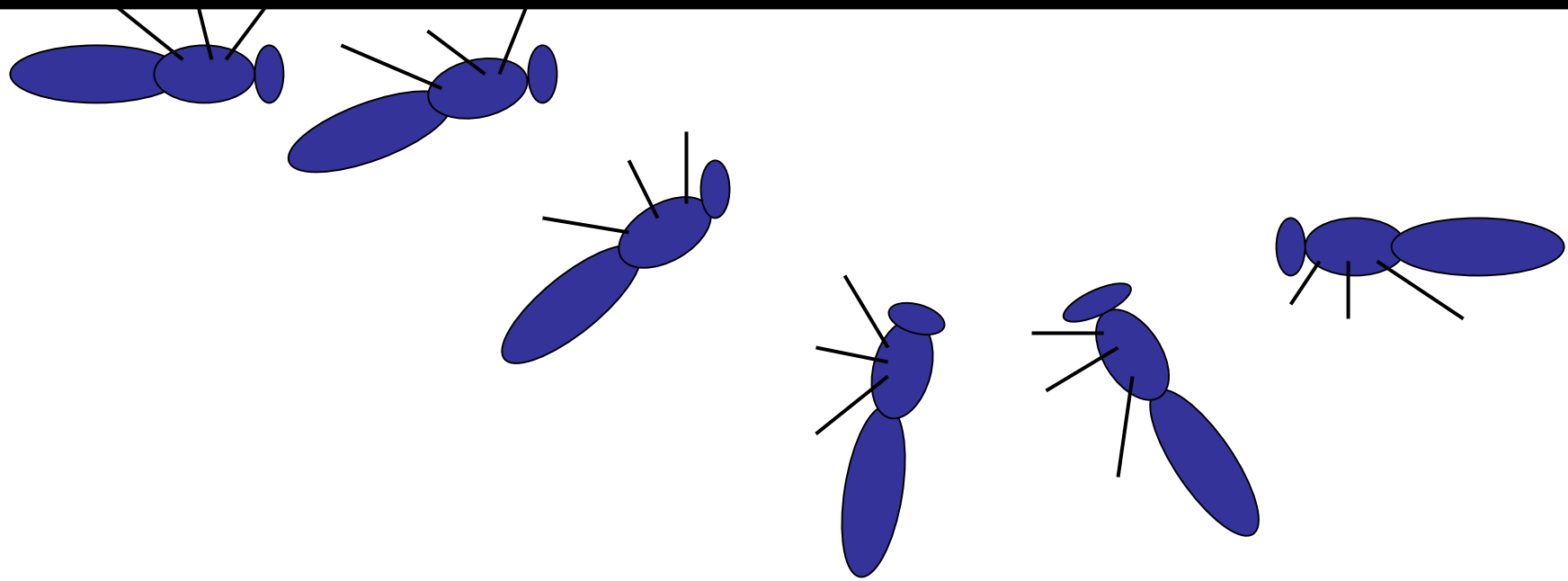






Difference =
27 percentage points

Forelegs make first contact



rotation





TRECE
INCORPORATED
Pherocon[®] Trap
Salmon Spherocon

© 1994 TRECE, INC., Salinas, CA, USA

Pherocon[®] 1C Trap
TRECE
INCORPORATED

THIS SIDE UP FOR WALL MOUNT

Remove protective paper from adhesive and attach to clean wall or underside of shelf. Bend all score marks at a right, 90° angle.

TOP

STORGARD

THE DISCREET TRAP

Insect Monitoring System for Moths & Beetles



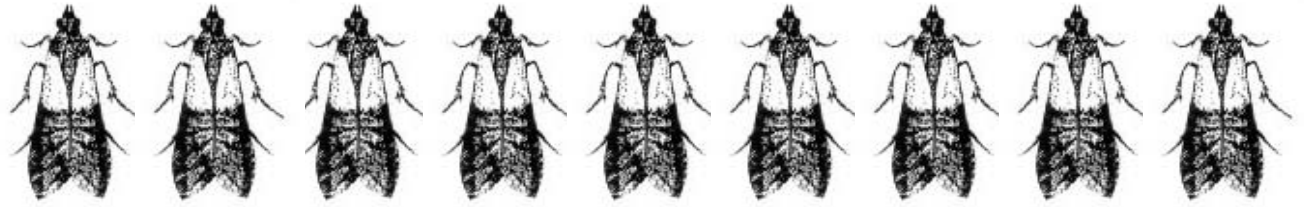
Patent Pending

Press after mounting

Trap stop

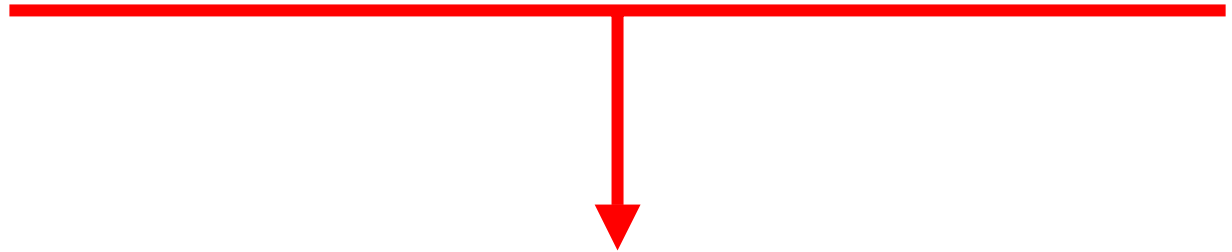
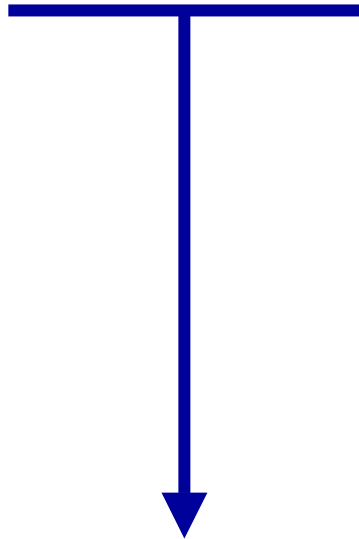
Ram

Wall or unders



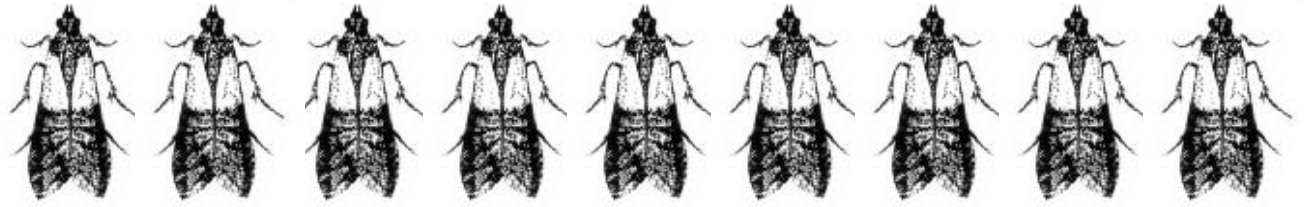
10% escape

90% caught in a trap



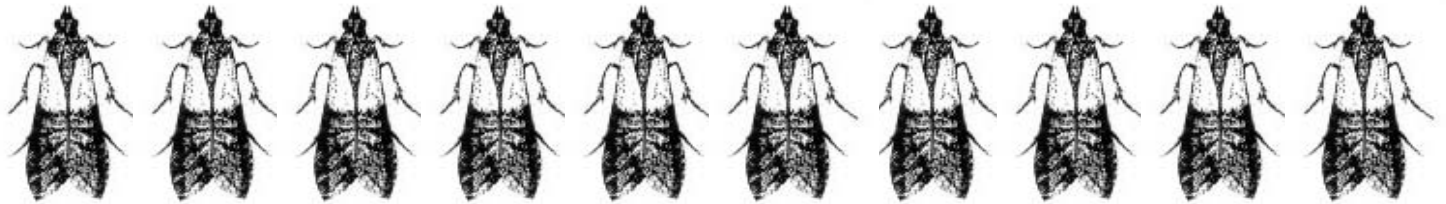
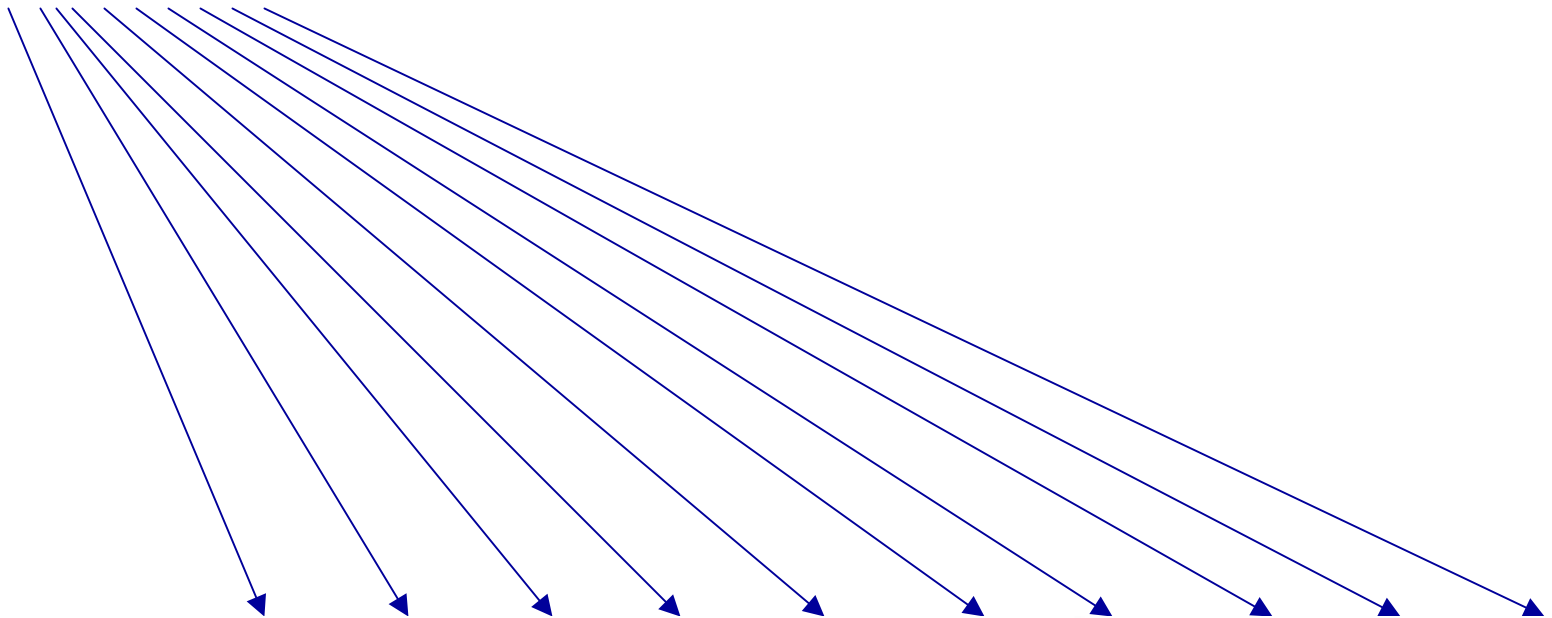
X

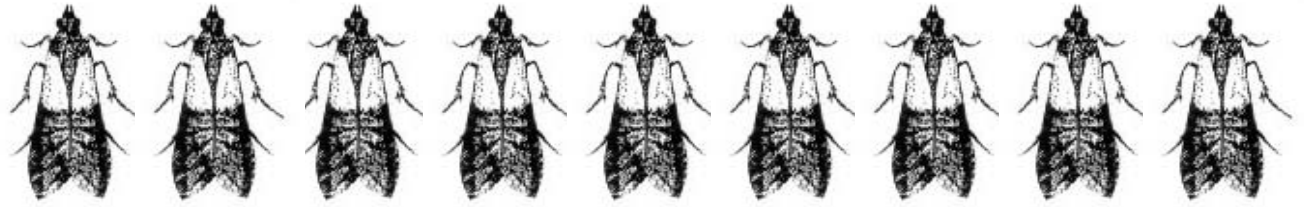
Survive to reproduce



10% escape

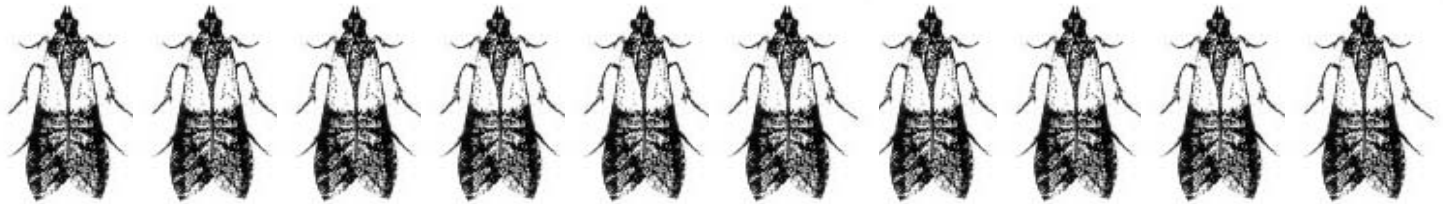
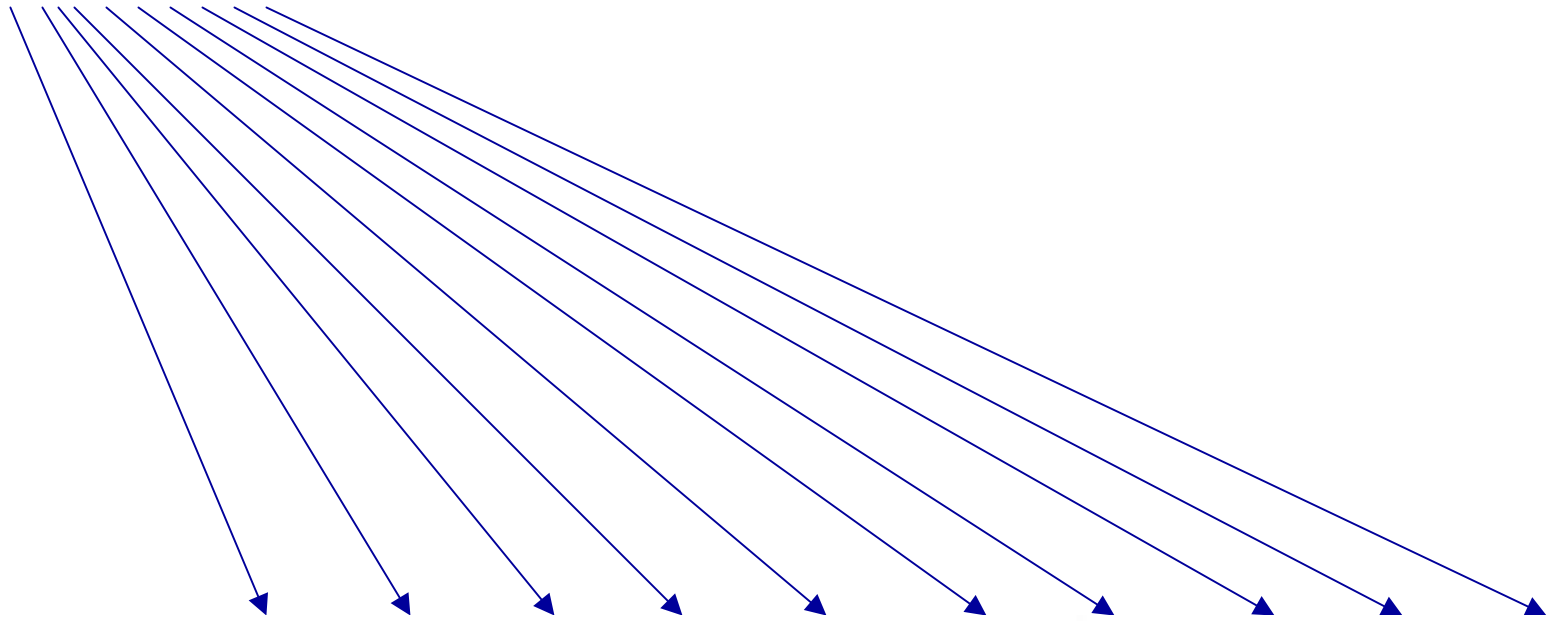
90% caught in a trap



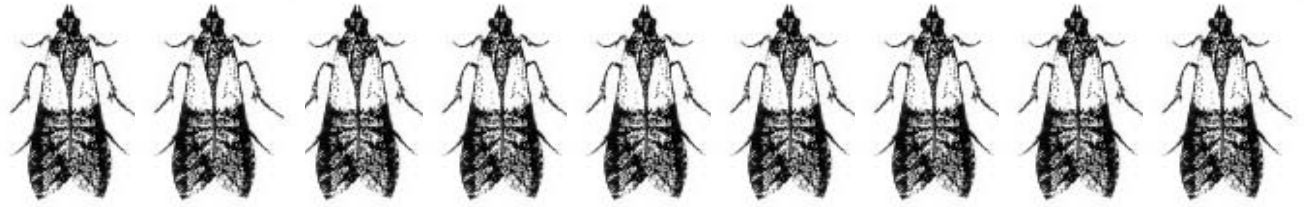


Generally unfit

Healthy moths trapped

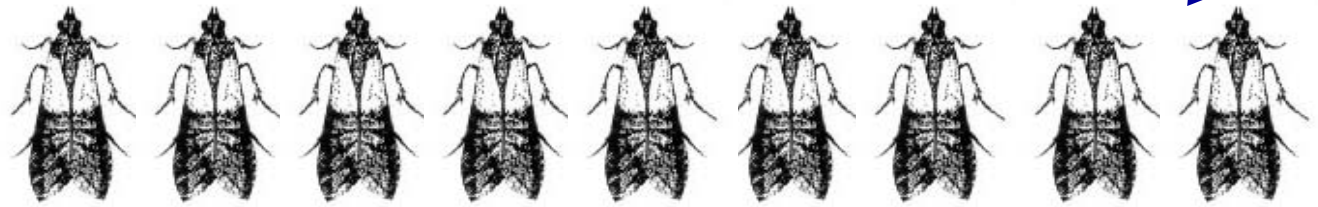
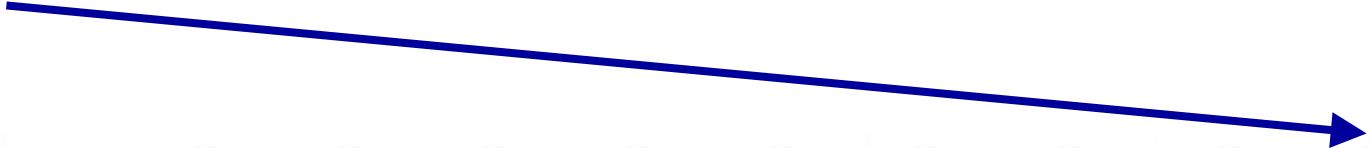
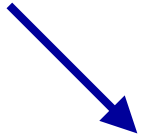


Unfit progeny

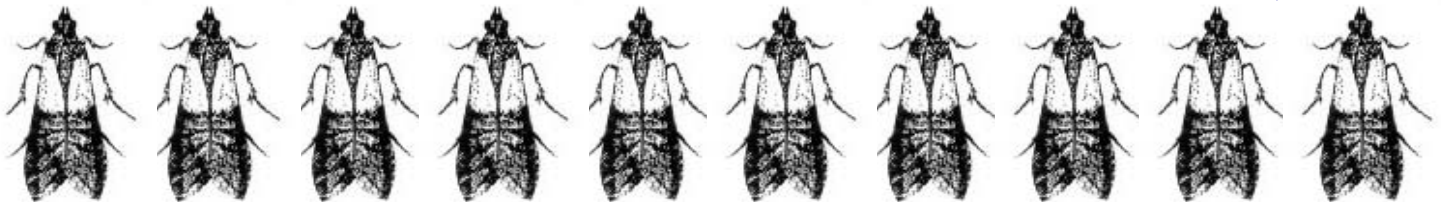
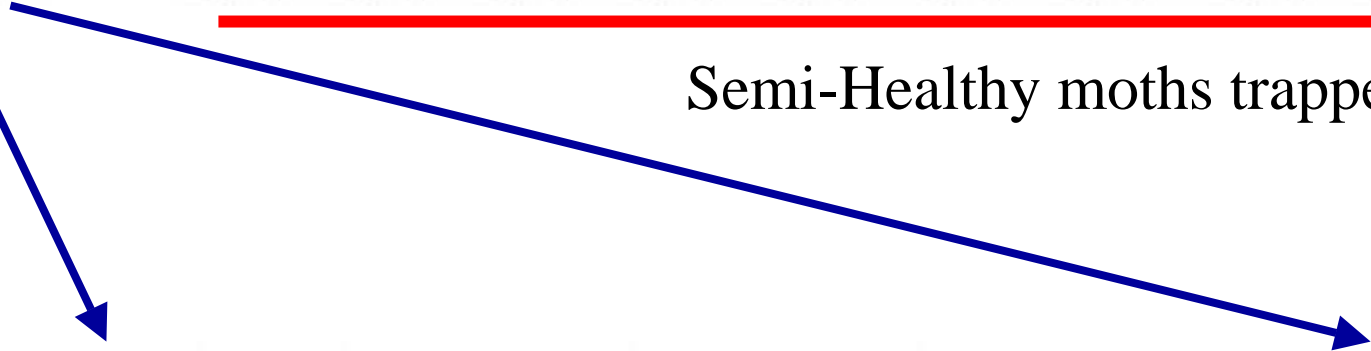
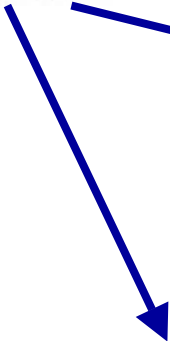


10% escape

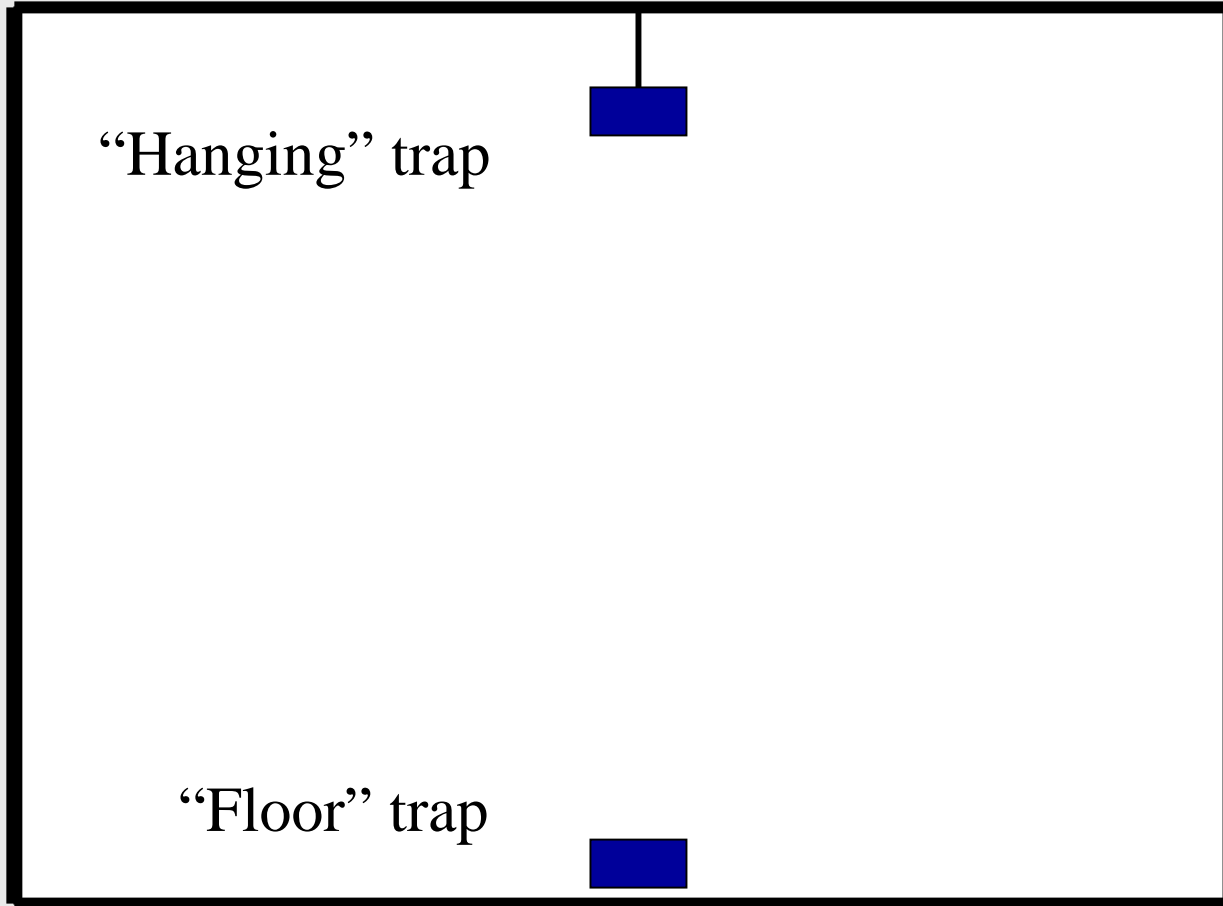
Healthy moths trapped



Semi-Healthy moths trapped



Experimental chamber



↓
20%