

EVALUATION OF SEVEN COMMERCIAL MOSQUITO CONTROL TRAPS

John P. Smith and Jimmy D. Walsh



ABSTRACT: The Mosquito Magnet Liberty captured 3X more mosquitoes than the next best traps (SonicWeb and Mosquito Magnet Defender) and over 6X more than the other traps tested. The greatest number of species (19) was caught in the Liberty trap. The SonicWeb and Defender recovered the next greatest species diversity (16).

INTRODUCTION: Last year we presented results on the mosquito-capturing prowess of eight commercial mosquito traps. This presentation provides comparative data on additional models. The purpose was to evaluate the numbers and species caught and **NOT** to assess whether mosquito traps could effectively control mosquitoes. A two-year mosquito control efficacy study was begun this year, however, data were not ready to include in this presentation.

MATERIALS & METHODS: The study was conducted in the summer of 2003 on the campus of the John A. Mulrennan Sr., Public Health Entomology Research & Education Center (PHEREC) of Florida A&M University. PHEREC resides on a 10-acre peninsula surrounded by salt marsh on the St. Andrews Bay in NW Florida.

Seven traps* (Figs. 2-7) were positioned one trap per location at seven sites separated by at least 100 meters and operated 24/7. Each morning, traps were emptied and reset for a 24-hr collection. Traps were rotated clockwise to the next site after collection until each trap had occupied all locations in a 7X7 Latin-square design. The study was repeated three times so each trap ran a total of 21 days, three times at seven locations. Traps were re-run in the same site when mechanical failures, inclement weather, or very low mosquito populations were encountered.

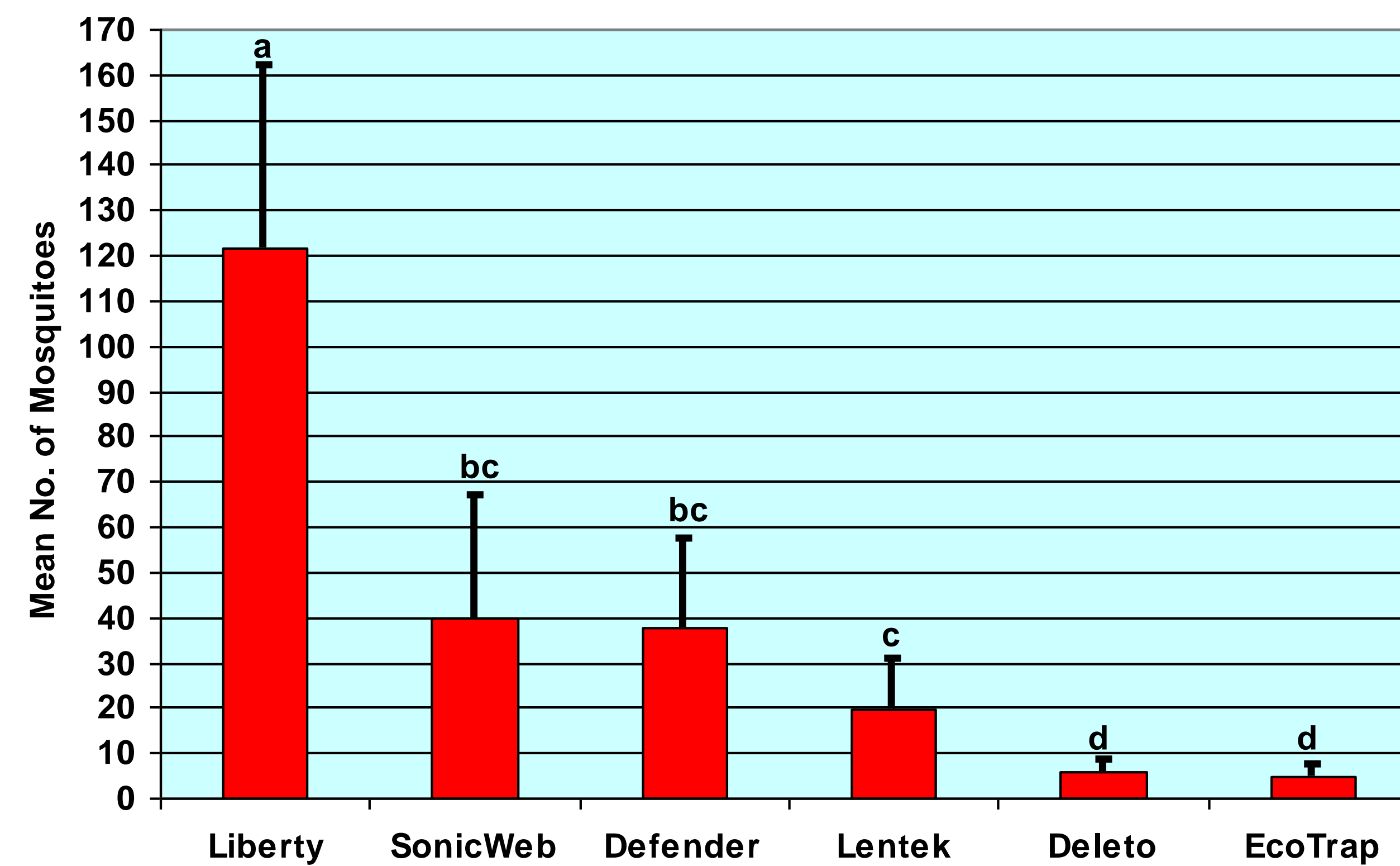
RESULTS: The average number of mosquitoes collected in each trap is presented in Fig. 1. Species composition is shown in Figures 8-13. There were significant differences in the numbers and species caught among the six traps. The Mosquito Magnet Liberty captured 3X more mosquitoes than the next best traps, the SonicWeb and Defender, and over 6X more than the remaining traps. The Liberty trap sampled the greatest species diversity with 19 collected. The SonicWeb and Defender tied with 16 species.

CONCLUSIONS: The Mosquito Magnet Liberty consistently outperformed the other traps tested. It should be among the first traps considered when evaluating traps for control.

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*One of the seven traps tested was not presented because of proprietary issues. It captured about half the average of the Liberty trap.

Fig. 1. Average number & 95% C.I. of mosquitoes captured by trap/day (n=21).



Note: Means followed by the same letter are not significantly different (p=0.05) by Waller-Duncan K-ratio T-test and by Duncan's Multiple Range Test.

Fig. 2. Mosquito Magnet Liberty (American Biophysics Corporation)



Fig. 3. Mosquito Magnet Defender (American Biophysics Corporation)



Fig. 8. Mosquito Magnet Liberty Species Composition

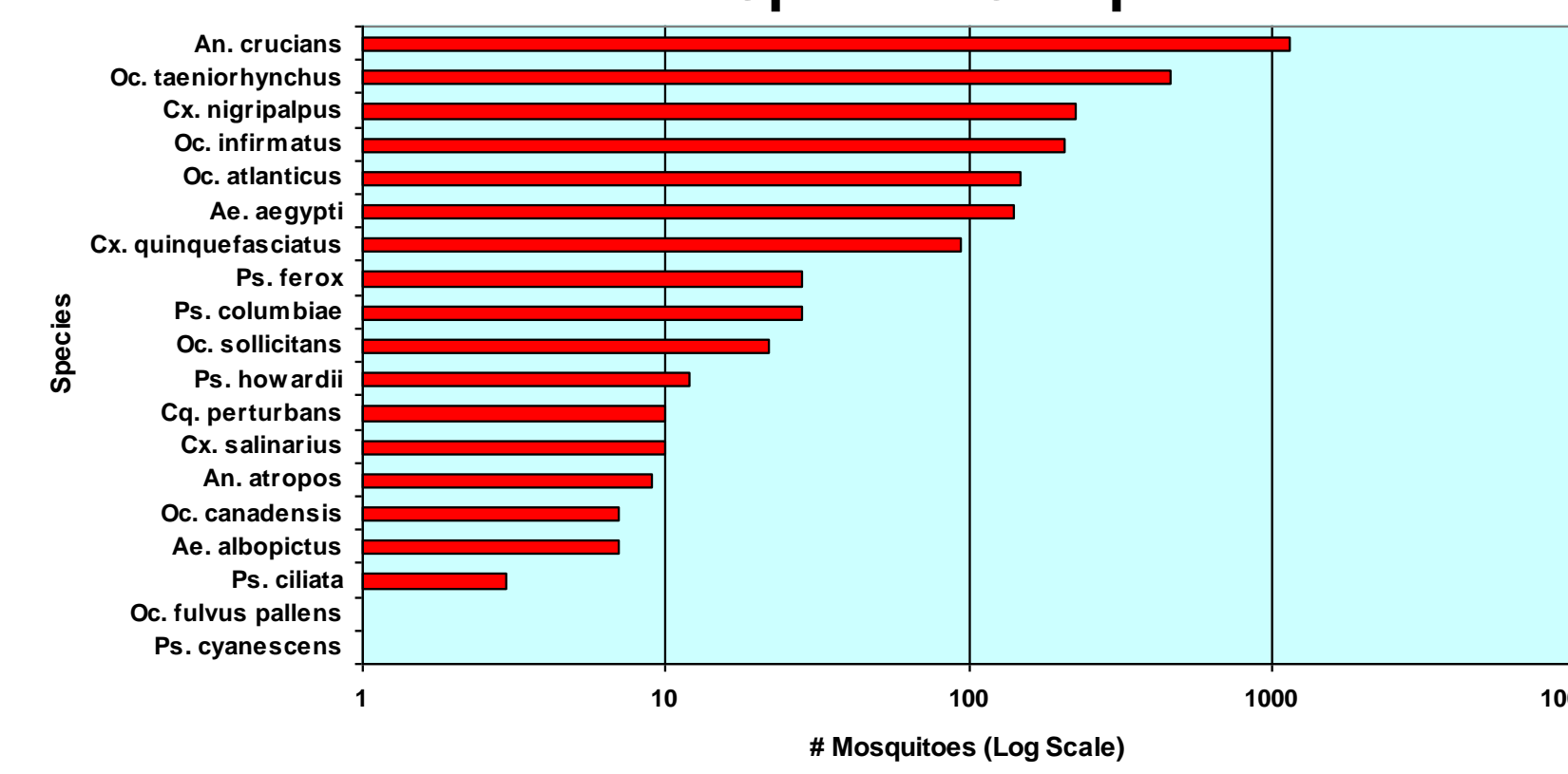


Fig. 9. Mosquito Magnet Defender Species Composition

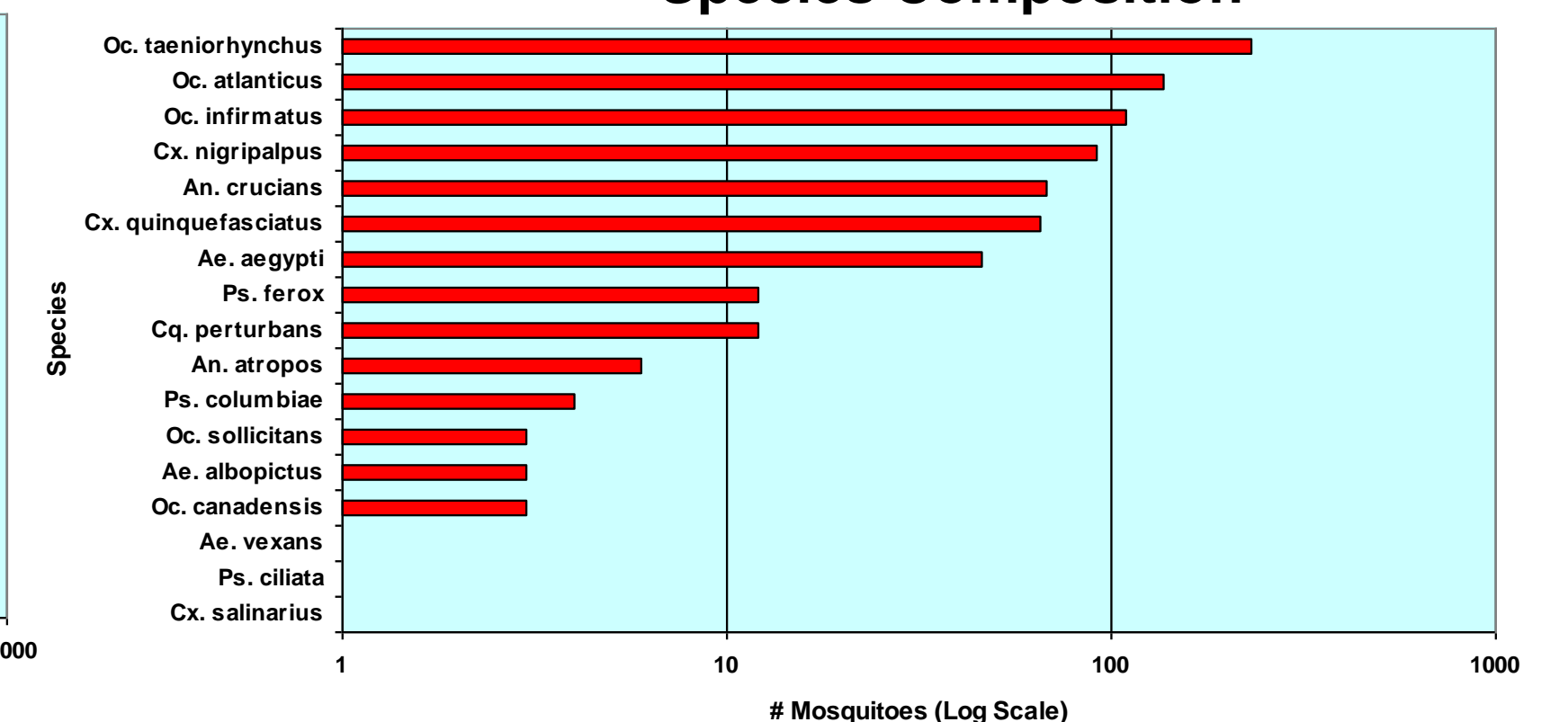


Fig. 4. EcoTrap Mosquito Trap (Lentek International, Inc.)



Fig. 5. Lentek Mosquito Trap (Lentek International, Inc.)



Fig. 6. Mosquito Deleto 2200 System (Coleman Corporation)



Fig. 7. SonicWeb (Applica Consumer Products, Inc.)



Fig. 10. EcoTrap Mosquito Trap Species Composition



Fig. 11. Lentek Mosquito Trap Species Composition

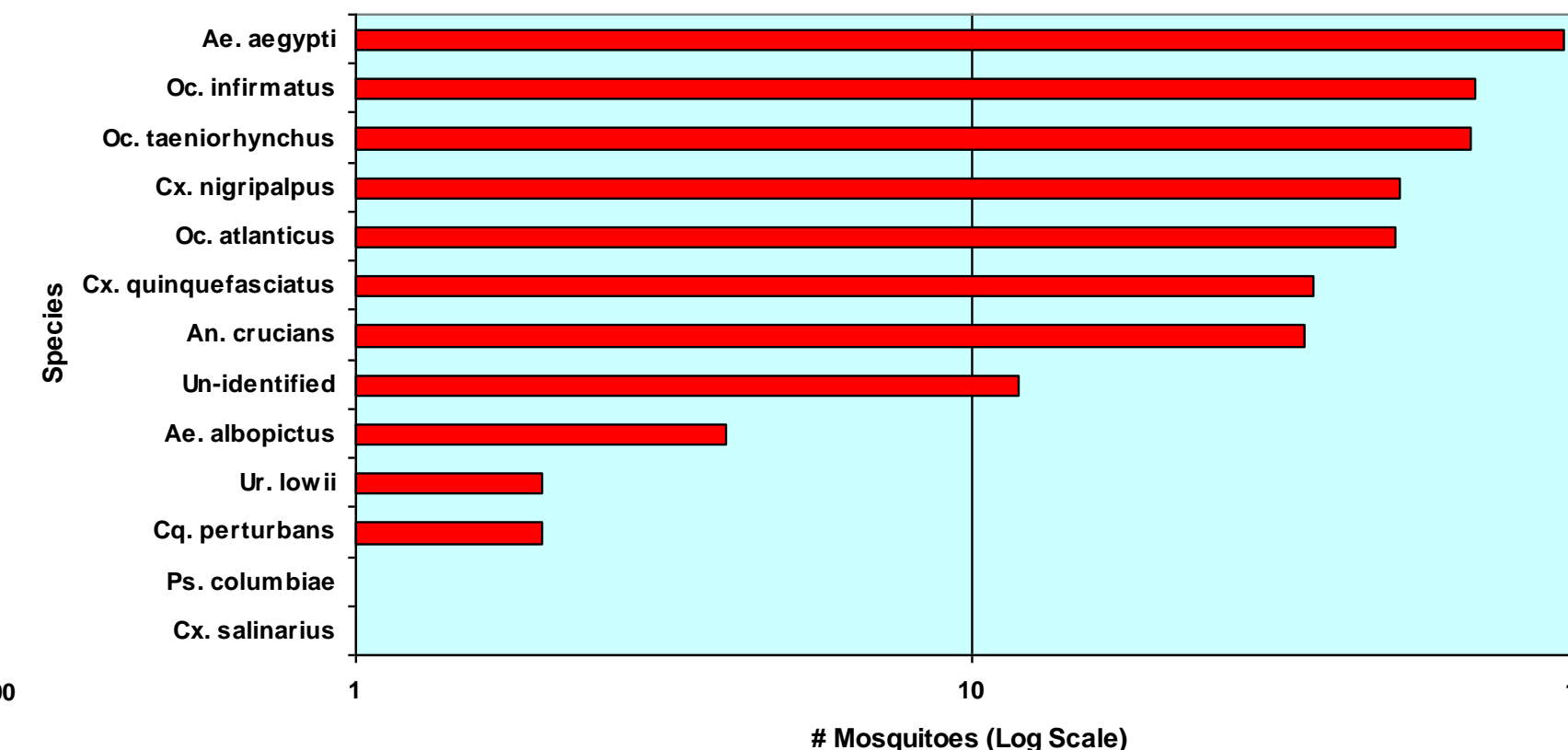


Fig. 12. Mosquito Deleto Species Composition

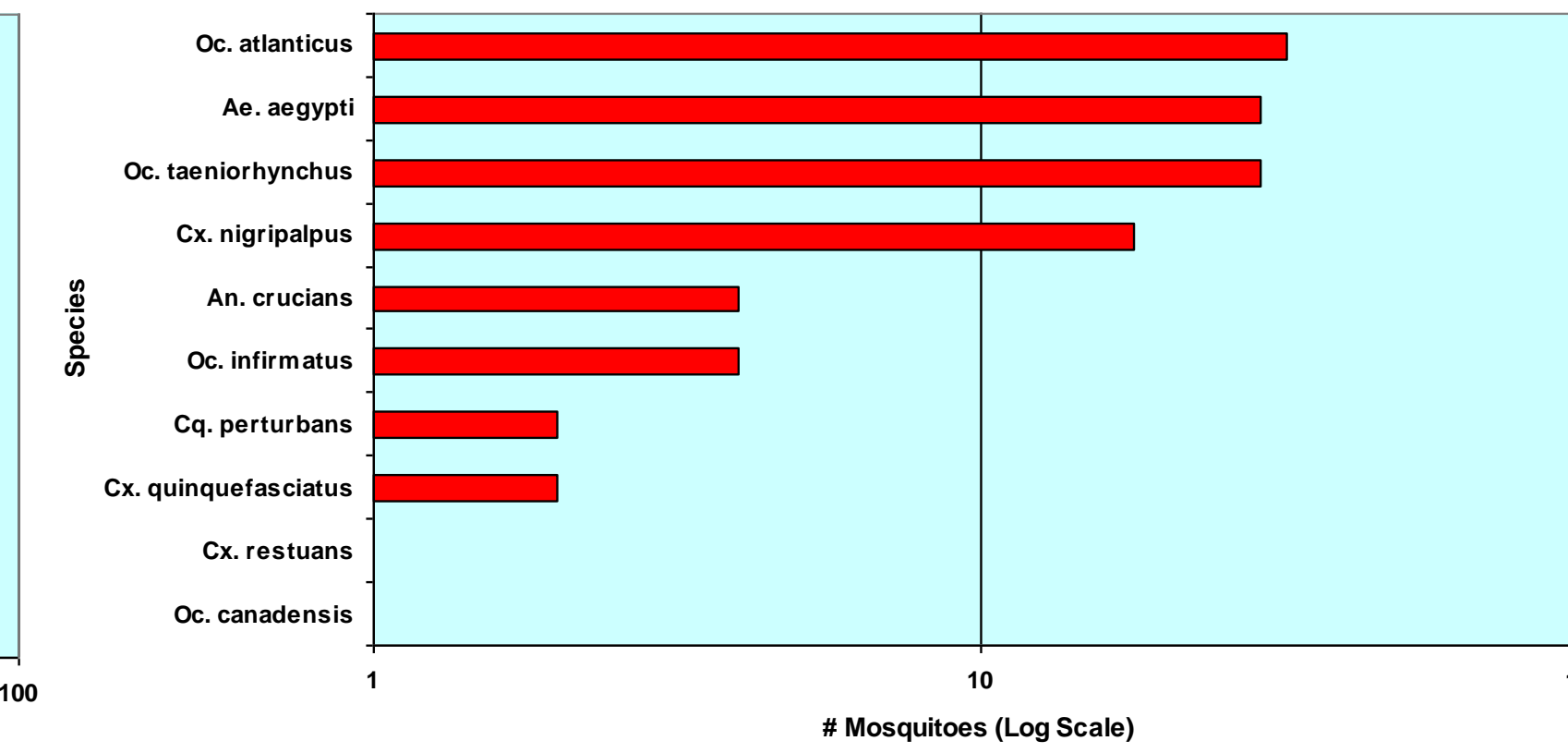


Fig. 13. SonicWeb Species Composition

