

MOSQUITO-CAPTURING PROWESS OF SEVERAL COMMERCIAL TRAPS

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ABSTRACT: The Mosquito MegaCatch and the Mosquito Magnet Liberty collected considerably more mosquitoes and species than most of the other traps tested. The SonicWeb collected several magnitudes fewer mosquitoes.

INTRODUCTION: Mosquito control moved to the forefront with the recent emergence of West Nile virus. The public was bombarded weekly with information on the importance of avoiding and controlling mosquitoes in their yards. Combine this with the anti-pesticide sentiment, and it was easy to see the opportunity was ripe for marketing mosquito traps. Consequently, the number of companies manufacturing mosquito traps has increased dramatically in the last 2-3 years. This has led to a need for scientific evaluation of these traps.

The purpose of this study was to compare the mosquito-trapping prowess of eight traps, seven commercial and one under development. The objective was to simply document the numbers and species caught by each trap. This study was not designed to determine if the various mosquito traps were effective for control. We propose to examine that hypothesis next year.

MATERIALS & METHODS: This study was conducted in the summer and fall of 2002 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 St. Andrews Bay in NW Florida.

Eight traps (Fig. 1-8) were positioned one trap per location at eight well separated locations and operated continuously from 3:30 p.m. to 7:00 a.m. C.T. Traps were rotated clockwise to the next location after each night run. The traps were run daily except for weekends and on days when weather was unsuitable until each trap had occupied all eight positions. The study was repeated three times so that each trap ran a total of 24 days, three times at eight locations. Traps were rerun in the same location when mechanical failures were encountered.

RESULT & DISCUSSION: Total mosquito count and variance for each trap is presented in Figure 9. Species composition is shown in Figures 10-17. There were significant differences in the numbers and species caught among the eight traps. The Mosquito MegaCatch and the Mosquito Magnet Liberty captured 2.5X to almost 3X more mosquitoes than the next best trap, the Lentek Mosquito Trap, and 4X to 6X more than the Mosquito Deleto, Mosquito Deleto Prototype, Mosquito PowerTrap and The DragonFly. The SonicWeb collected considerably fewer mosquitoes than any of the other traps. The Mosquito Magnet Liberty sampled the greatest species diversity with sixteen collected. The Mosquito MegaCatch and Mosquito PowerTrap tied with twelve species.

Fig. 1. Mosquito MegaCatch (Envirosafe Technologies N.Z. Ltd.)



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



Fig. 3. Flowtron PowerTrap (Flowtron Outdoor Products)



Fig. 4. The DragonFly (BioSensory, Inc.)



Fig. 10. Mosquito MegaCatch Species Composition

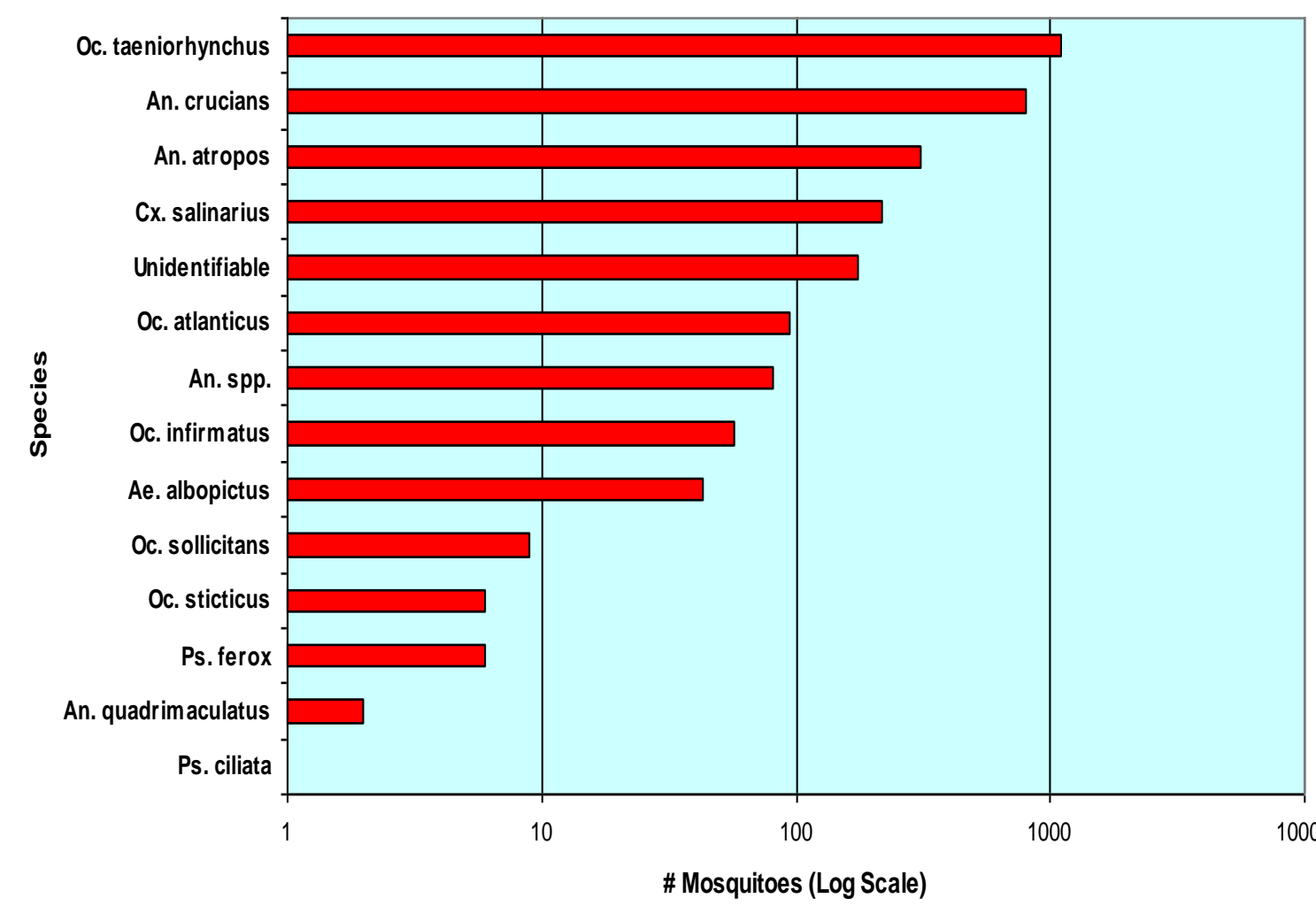


Fig. 11. Mosquito Magnet Species Composition

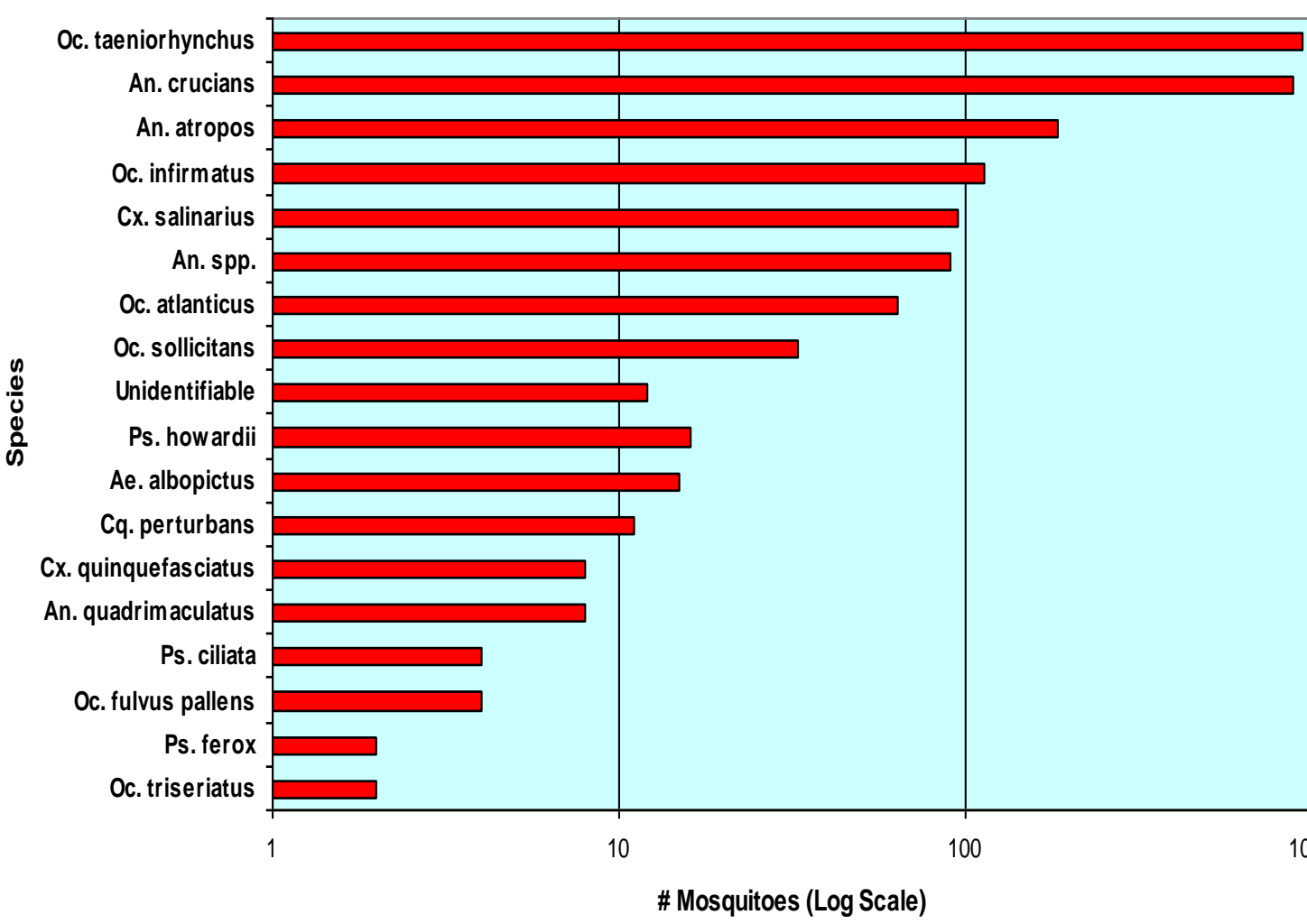


Fig. 12. Flowtron PowerTrap Species Composition

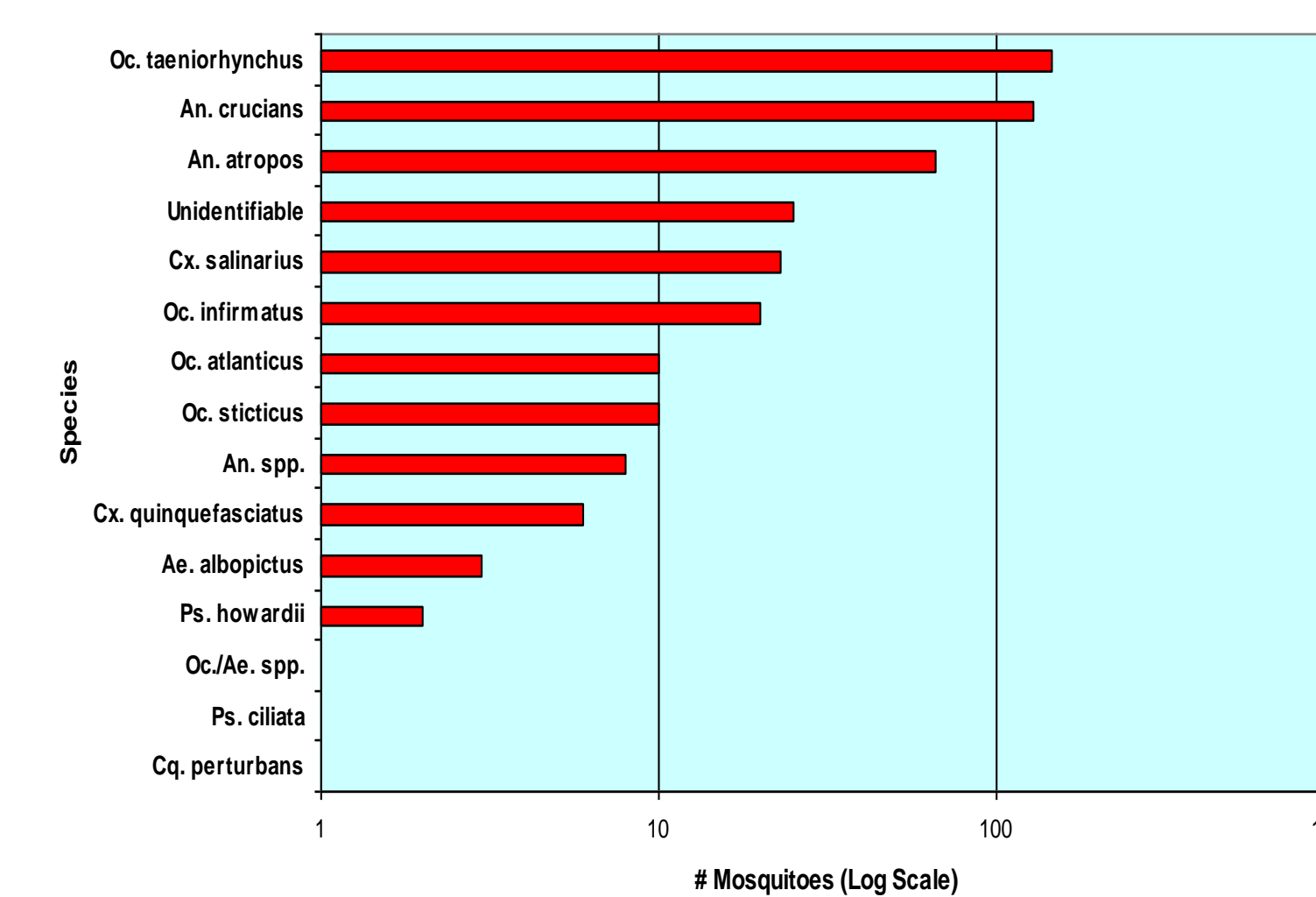


Fig. 13. BioSensory DragonFly Species Composition

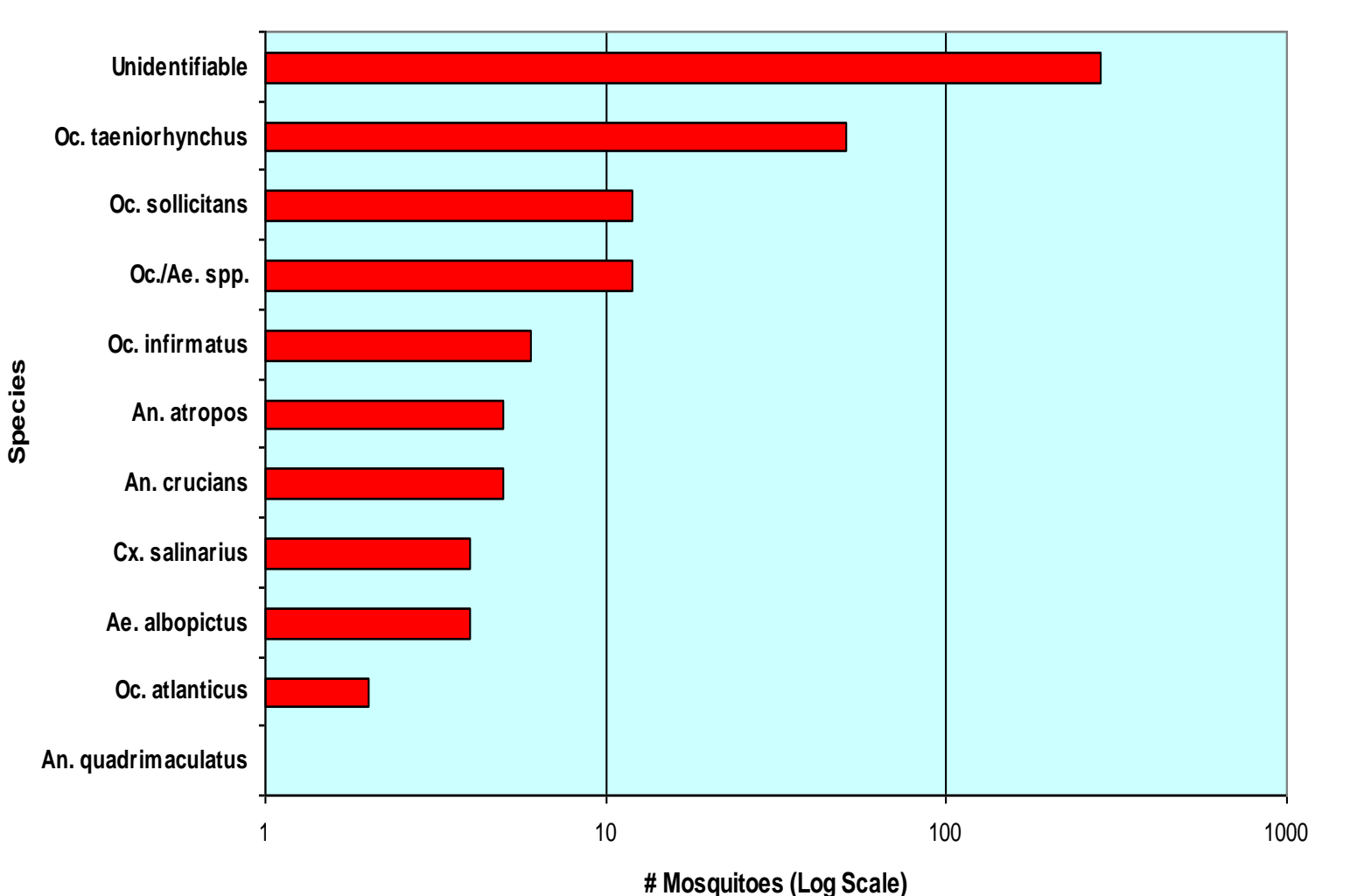


Fig. 5. Lentek Mosquito Trap (Lentek International, Inc.)



Fig. 6. Mosquito Deleto (Coleman Corporation)



Fig. 7. Mosquito Deleto Prototype (Coleman Corporation)



Fig. 8. SonicWeb (Applica Consumer Products, Inc.)



Fig. 9. Total # Mosquitoes Captured by Trap.

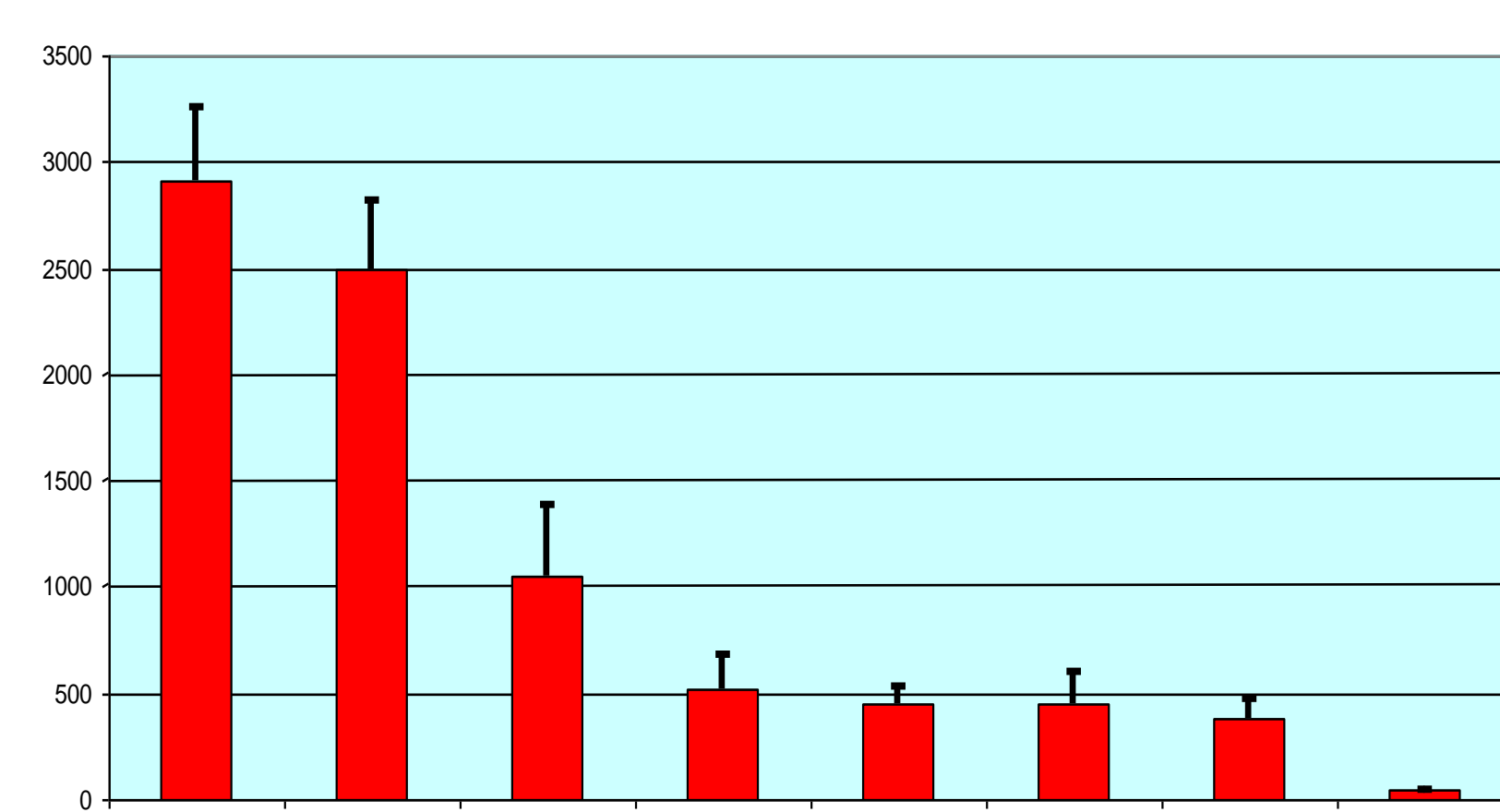


Fig. 14. Lentek Mosquito Trap Species Composition

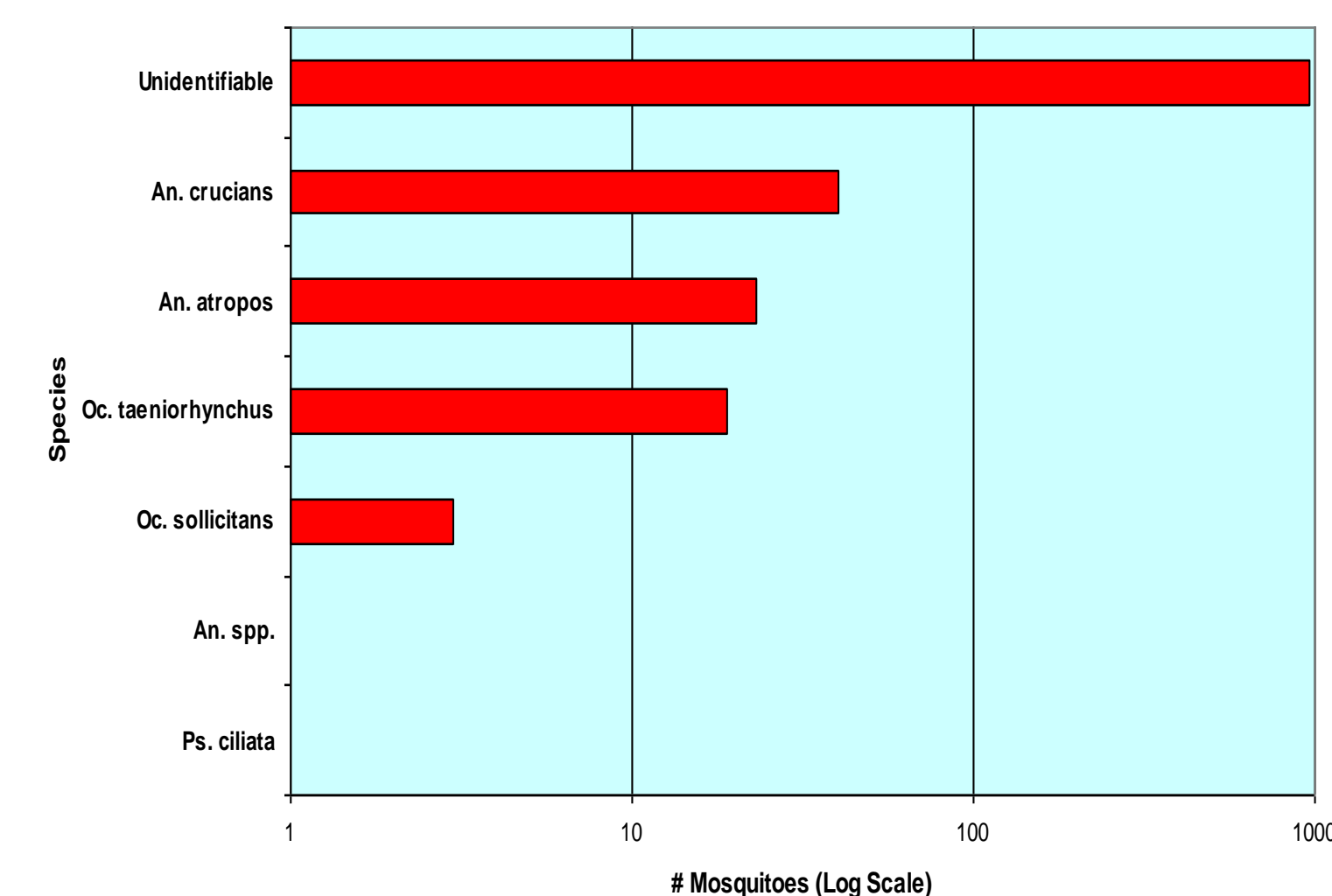


Fig. 15. Mosquito Deleto Species Composition

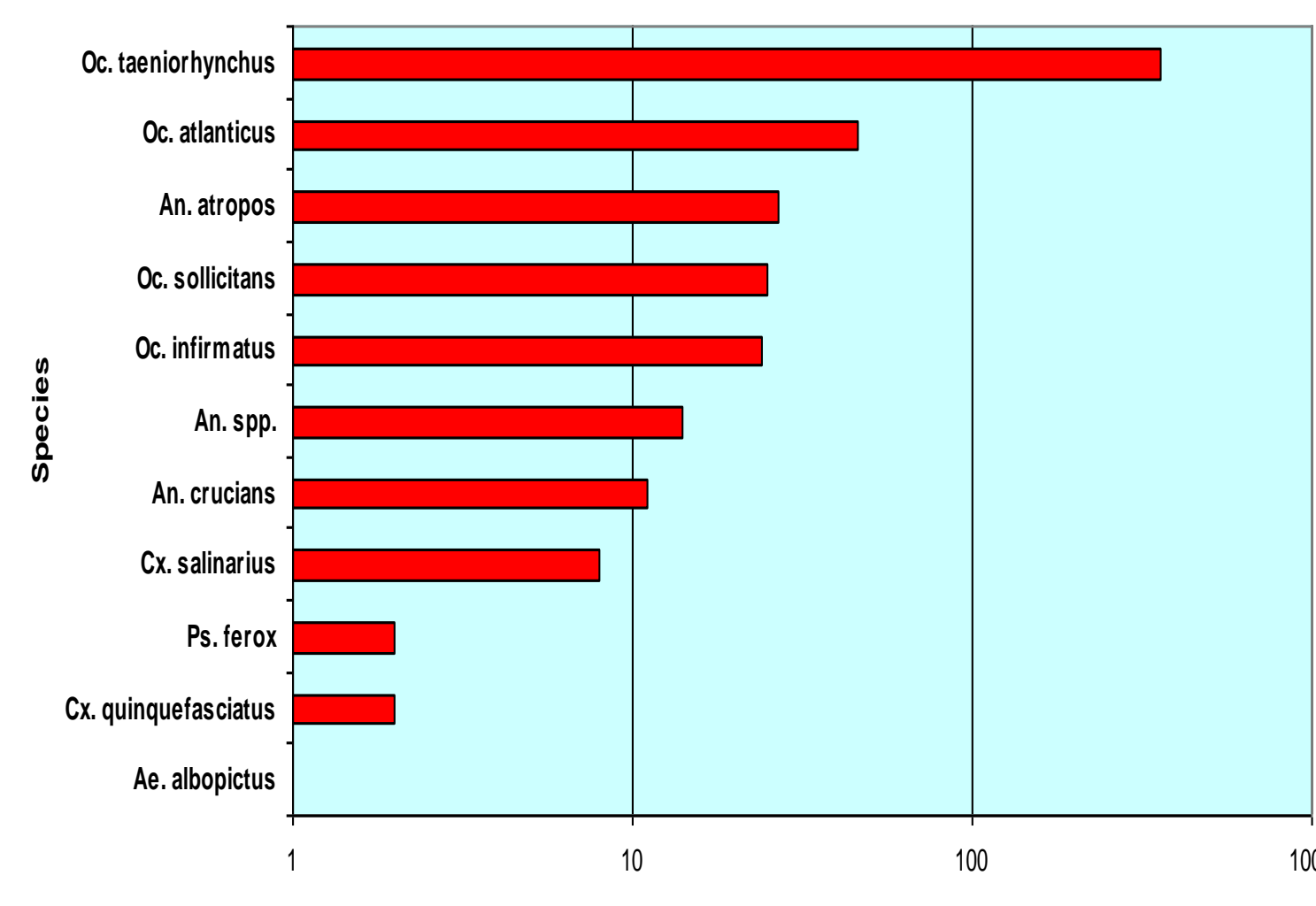


Fig. 16. Mosquito Deleto Prototype Species Composition

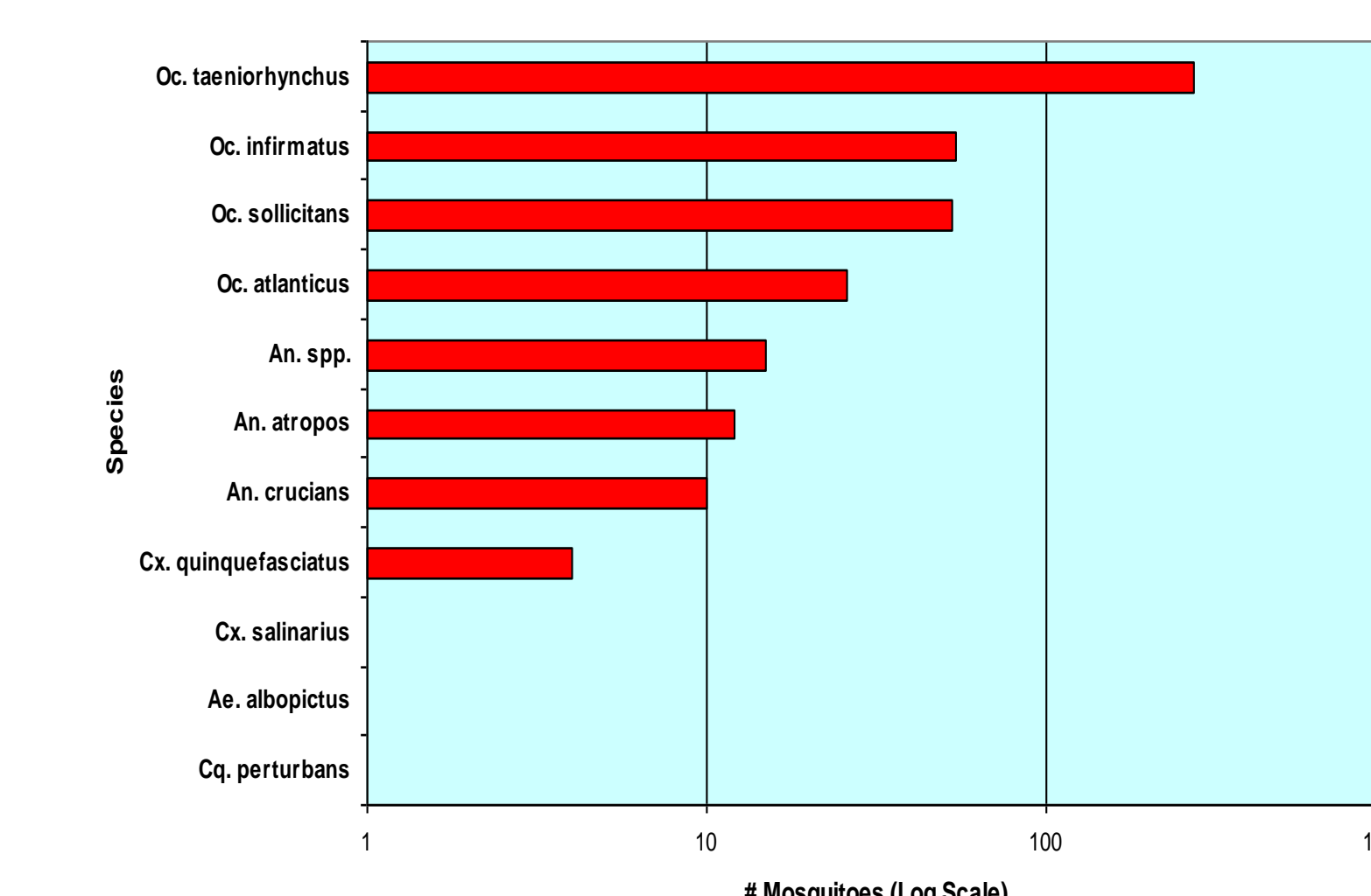


Fig. 17. SonicWeb Species Composition

