

THE VALUE OF ID TO A MOSQUITO CONTROL PROGRAM



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Association

IDENTIFICATION IS THE KEY TO HAVING AN EFFICIENT AND SUCCESSFUL PROGRAM



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By now you should know that all mosquitoes are the not same!

- To have effective control - you must **target** the problem species
- To target - you must **identify the problem species**
- To **identify** - you must conduct surveillance and collect specimens
- To **conduct surveillance** - you must know where to collect (at complaint sites, previously known sites, or areas where you suspect mosquitoes will be a problem)



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THE PRIMARY GOAL OF IDENTIFICATION IS TARGETING!



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WHAT IS TARGETING?

TARGETING IS DETERMINING THE EXACT SPECIES (THROUGH ID) THAT IS/ARE CAUSING THE MOSQUITO PROBLEMS, AND BASING YOUR CONTROL EFFORTS ON THE BEHAVIOR, BIOLOGY, SOURCE, AND YOUR KNOWLEDGE OF THOSE PROBLEM SPECIES.



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WHY DO ALL OF THAT?

Because each species is distinct in:

- . Where the larvae are found
- . When, where and what it bites
- . Where it rests
- . How far it flies
- . Vector abilities
- . Pesticide susceptibility
- . Many other important attributes



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FOR ADULT CONTROL THE SPECIES NAME LEADS YOU TO INFORMATION ABOUT:

- Importance (vector or nuisance)
- Type of larval habitats
- Biting periodicity
- Normal blood hosts
- Normal flight range
- Traps that are effective
- Resting sites
- Pesticide susceptibility, tolerance, or resistance



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FOR LARVAL CONTROL THE SPECIES NAME LEADS YOU TO INFORMATION ABOUT:

Beside things listed under Adult, there are:

- The type of larval habitat it/they utilize (permanent water, temporary water, artificial or natural containers, or salt marshes)
- The correct control method and pesticides most effective for the targeted larvae
- The peak time of the year for larvae of your target species



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THINGS NEEDED TO DO IDENTIFICATION PROPERLY

- A good microscope with 60X magnification
- Surveillance and monitoring programs
- A dedicated person to do ID
- Adequate library and references
- A supportive boss that understands the need for ID



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A MAJOR MISTAKE IN MOSQUITO ID IS TRYING TO ID EVERY SPECIMEN

- Specimens that are broken, rubbed, covered in oil or fungus, should not be identified
- Usually about 5 % of a light trap collection are in this condition
- Don't be ashamed to simply label them by the Genus name
- DO NOT GUESS, IF YOU DON'T KNOW, SAY SO



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BENEFITS OF IDENTIFICATION IN YOUR PROGRAM

- You will know the problem species at any given time
- Control methods or products can be changed to deal with different species
- Pre- and post-control collections can verify the effectiveness of your program
- You can establish larval surveillance and control efforts based on knowledge of the target species
- Your over-all program will be much more successful and cost effective



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WHY ID IS MORE SIMPLE THAN YOU THINK

- All areas and locations in the state are different, so *your* program must target *your* problems
- At any one time in any one area there are usually no more than 4-6 problem species
- During the mosquito season there will be no more than 10-12 real problem species that will account for 95% of the annual collections



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**BASING YOUR CONTROL EFFORTS
ONLY ON UNIDENTIFIED SPECIMEN
COUNTS AND COMPLAINTS WILL
WASTE MANPOWER, FUNDS, TIME,
AND PESTICIDE!**



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Sources For Finding Information About Each Species

- Text Books
 - “Mosquito Ecology”
 - “Mosquitoes Of North America”
- Journals
 - Journal Of The American Mosquito Control Association (JAMCA)
 - Journal Of Medical Entomology (JME)
 - Journal Of Vector Ecology (JVE)
- Trade Magazines
 - Wing Beats
- Newsletters
 - The Landing Rate Times
 - Biting Times (North Carolina Mosquito Control Assn.)
 - The Skeeter (Virginia Mosquito Control Assn.)
- And Many Other Sources



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THE BOTTOM LINE

**IDENTIFICATION IS THE KEY
TO HAVING A SUCCESSFUL,
EFFICIENT, AND COST
EFFECTIVE PROGRAM!**



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