Mosquito ID Quizzes

1st slide is questions

2nd slide is questions with answers and a link back to the mosquito ID training page

Section 1: The Value of Mosquito Identification

1. What are the 4 steps to effective control?
    a) Know where to collect-Conduct surveillance-Identify species-Target the problem
    b) Collect specimens-Follow complaints-Identify species-Conduct surveillance
    c) Map data-Target the problem-Conduct surveillance-Follow complaints
    d) Target species-Identify species-Map data-Read up on mosquitoes
2. Each mosquito species is distinct in its bionomics.
    a) True
    b) False
3. Knowing the species allows you to target that species more effectively for both larval and adult control.
    a) True
    b) False
4. It is ok to guess when you are identifying mosquitoes.
    a) True
    b) False
5. Which of the following is true.
    a) Mosquito identification can help you choose your control methods and products
    b) Identification won't help with verifying your programs effectiveness.
    c) Identification won't make your program more effective and cost effective.
    d) All of the above.
    e) None of the above.

Section 1: The Value of Mosquito Identification

1. What are the 4 steps to effective control?
    a) Know where to collect-Conduct surveillance-Identify species-Target the problem
    b) Collect specimens-Follow complaints-Identify species-Conduct surveillance
    c) Map data-Target the problem-Conduct surveillance-Follow complaints
    d) Target species-Identify species-Map data-Read up on mosquitoes
2. Each mosquito species is distinct in its bionomics.
    a) True
    b) False
3. Knowing the species allows you to target that species more effectively for both larval and adult control.
    a) True
    b) False
4. It is ok to guess when you are identifying mosquitoes.
    a) True
    b) False
5. Which of the following is true.
    a) Mosquito identification can help you choose your control methods and products
    b) Identification won't help with verifying your programs effectiveness.
    c) Identification won't make your program more effective and cost effective.
    d) All of the above.
    e) None of the above.

Section 2: Mosquito Life Cycle

1. Mosquitoes are aquatic insects.
    a) True
    b) False
2. Adult insects typically have 6 legs.
    a) True
    b) False
3. Both male and female mosquitoes feed on blood.
    a) True
    b) False
4. The mosquito life cycle includes:
    a) Egg-Nymph-Pupa-Adult
    b) Egg-Larva-Pupa-Adult
    c) Larva-Nymph-Adult
    d) Egg-Adult
5. A basic classification of larval habitats includes:
    a) Soil-based water collection
    b) Container water collections
    c) Neither
    d) Both

Section 2: Mosquito Life Cycle

1. Mosquitoes are aquatic insects.
    a) True
    b) False
2. Adult insects typically have 6 legs.
    a) True
    b) False
3. Both male and female mosquitoes feed on blood.
    a) True
    b) False
4. The mosquito life cycle includes:
    a) Egg-Nymph-Pupa-Adult
    b) Egg-Larva-Pupa-Adult
    c) Larva-Nymph-Adult
    d) Egg-Adult
5. A basic classification of larval habitats includes:
    a) Soil-based water collection
    b) Container water collections
    c) Neither
    d) Both

Section 3: What is a mosquito?

1. What are the basic body parts of an insect?
    a) Head-Abdomen
    b) Head-Thorax-Abdomen
    c) Cephalothorax-Abdomen-Legs
    d) Wings-Body-Legs
2. The legs and body of a mosquito have scales on them.
    a) True
    b) False
3. Mosquitoes have 2 wings and 6 legs attached to the abdomen.
    a) True
    b) False
4. You can differentiate the Family anopheline and culicine by the length of the proboscis.
    a) True
    b) False
5. Male mosquitoes have fuzzy antennae.
    a) True
    b) False

Section 3: What is a mosquito?

1. What are the basic body parts of an insect?
   a) Head-Abdomen
   b) Head-Thorax-Abdomen
   c) Cephalothorax-Abdomen-Legs
   d) Wings-Body-Legs
2. The legs and body of a mosquito have scales on them.
   a) True
   b) False
3. Mosquitoes have 2 wings and 6 legs attached to the abdomen.
   a) True
   b) False
4. You can differentiate the Family anopheline and culicine by the length of the proboscis.
   a) True
   b) False
5. Male mosquitoes have fuzzy antennae.
   a) True
   b) False

Section 4: Adult Mosquito Morphology

1. The mosquito thorax is divided into Pro, Meso, and Meta regions for the purpose of identification.
    a) True
    b) False
2. Mosquito wing veins are too variable to make them good for identification.
    a) True
    b) False
3. Identifying leg markings are typically found on the hind leg of the mosquito.
    a) True
    b) False
4. Abdominal segments are numbered from the tip to the thorax.
    a) True
    b) False
5. Male genitalia are useful for identification, but difficult to use.
    a) True
    b) False

Section 4: Adult Mosquito Morphology

1. The mosquito thorax is divided into Pro, Meso, and Meta regions for the purpose of identification.
   a) True
   b) False
2. Mosquito wing veins are too variable to make them good for identification.
   a) True
   b) False
3. Identifying leg markings are typically found on the hind leg of the mosquito.
   a) True
   b) False
4. Abdominal segments are numbered from the tip to the thorax.
   a) True
   b) False
5. Male genitalia are useful for identification, but difficult to use.
   a) True
   b) False

Section 5: Field Identification of Mosquitoes

1. Field ID is a preliminary method that uses guesswork based on experience and knowledge of mosquitoes.
    a) True
    b) False
2. With practice you can field ID any species.
    a) True
    b) False
3. What do you look at first when doing field ID?
    a) Size
    b) Color
    c) Posture
    d) Season
4. There are very few advantages to field identification.
    a) True
    b) False
5. The best way to learn to field ID is to learn the diagnostic characteristics of the mosquitoes in your area.
    a) True
    b) False

Section 5: Field Identification of Mosquitoes

1. Field ID is a preliminary method that uses guesswork based on experience and knowledge of mosquitoes.
    a) True
    b) False
2. With practice you can field ID any species.
    a) True
    b) False
3. What do you look at first when doing field ID?
    a) Size
    b) Color
    c) Posture
    d) Season
4. There are very few advantages to field identification.
    a) True
    b) False
5. The best way to learn to field ID is to learn the diagnostic characteristics of the mosquitoes in your area.
    a) True
    b) False

Section 6: Microscopy and ID Work

1. Microscopes used for mosquito ID work are:
    a) Stereo Microscopes
    b) Compound Microscopes
    c) Polarizing Microscopes
2. There is only one mosquito key available for use in identifying Georgia mosquitoes.
    a) True
    b) False
3. A good light source is important for mosquito identification.
    a) True
    b) False
4. Among the tools used in identifying mosquitoes are:
    a) Fine-tipped forceps
    b) A teasing needle
    c) Both
    d) Neither
5. It is important to keep records of what species are found and where they are found.
    a) True
    b) False

Section 6: Microscopy and ID Work

1. Microscopes used for mosquito ID work are:
   a) Stereo Microscopes
   b) Compound Microscopes
   c) Polarizing Microscopes
2. There is only one mosquito key available for use in identifying Georgia mosquitoes.
   a) True
   b) False
3. A good light source is important for mosquito identification.
   a) True
   b) False
4. Among the tools used in identifying mosquitoes are:
   a) Fine-tipped forceps
   b) A teasing needle
   c) Both
   d) Neither
5. It is important to keep records of what species are found and where they are found.
   a) True
   b) False

Section 7: Knowing Mosquito Adults at the Generic Level

1. There are ____mosquito genera in the mid-Atlantic area.
2. *Anopheles* spp have palpi as long as their proboscis and longer than their antennae.
    a) True
    b) False
3. *Toxorhynchites* spp are large mosquitoes with:
    a) A proboscis that is thick and curves downward
    b) Palpi longer than their antennae
    c) Both
    d) Neither
4. *Psorophora* spp have both pre- and post-spiracular setae.
    a) True
    b) False
5. Apical means:
    a) Towards the head
    b) Away from the head
    c) Horizontal
    d) Invisible
6. *Aedes* spp have neither pre- nor post-spiracular setae.
    a) True
    b) False

Section 7: Knowing Mosquito Adults at the Generic Level (cont)

7. *Culiseta* spp have a small patch of setae on the ventral side of the wing at the base on the subcostal vein.
    a) True
    b) False
8. *Culex* spp have narrow, dark wing scales.
    a) True
    b) False
9. One thing that distinguishes some genera from others is whether the end of their abdomen is pointed or rounded.
    a) True
    b) False
10. Uranotaenia spp can be identified by distinctive wing veins.
    a) True
    b) False

Section 7: Knowing Mosquito Adults at the Generic Level

1. There are 12 mosquito genera in the mid-Atlantic area.
2. *Anopheles* spp have palpi as long as their proboscis and longer than their antennae.
    a) True
    b) False
3. *Toxorhynchites* spp are large mosquitoes with:
    a) A proboscis that is thick and curves downward
    b) Palpi longer than their antennae
    c) Both
    d) Neither
4. *Psorophora* spp have both pre- and post-spiracular setae.
    a) True
    b) False
5. Apical means:
    a) Towards the head
    b) Away from the head
    c) Horizontal
    d) Invisible
6. *Aedes* spp have neither pre- nor post-spiracular setae.
    a) True
    b) False

Section 7: Knowing Mosquito Adults at the Generic Level (cont)

7. *Culiseta* spp have a small patch of setae on the ventral side of the wing at the base on the subcostal vein.
   a) True
   b) False
8. *Culex* spp have narrow, dark wing scales.
   a) True
   b) False
9. One thing that distinguishes some genera from others is whether the end of their abdomen is pointed or rounded.
   a) True
   b) False
10. Uranotaenia spp can be identified by distinctive wing veins.
    a) True
    b) False

Section 8: Aedes and Ochlerotatus

1. Four characteristics of *Aedes* and *Ochlerotatus* spp are:
    a) Pre- and post-spiracular setae, pointed abdomen, basal bands on abdomen
    b) Post-spiracular setae present, pre-spiracular setae absent, pointed abdomen, basal bands on abdomen
    c) Post-spiracular setae present, pre-spiracular setae absent, rounded abdomen, basal bands on abdomen
    d) Pre- and post-spiracular setae, pointed abdomen, apical bands on abdomen
2. Markings on the head, thorax, abdomen, and legs help to distinguish one species from another.
    a) True
    b) False
3. Some important vectors belong to this genus.
    a) True
    b) False
4. All *Aedes* & *Ochlerotatus* spp have banded legs.
    a) True
    b) False
5. Some characteristics used in identification can be difficult to see.
    a) True
    b) False

Section 8: Aedes and Ochlerotatus

1. Four characteristics of *Aedes* and *Ochlerotatus* spp are:
   a) Pre- and post-spiracular setae, pointed abdomen, basal bands on abdomen
   b) Post-spiracular setae present, pre-spiracular setae absent, pointed abdomen, basal bands on abdomen
   c) Post-spiracular setae present, pre-spiracular setae absent, rounded abdomen, basal bands on abdomen
   d) Pre- and post-spiracular setae, pointed abdomen, apical bands on abdomen
2. Markings on the head, thorax, abdomen, and legs help to distinguish one species from another.
   a) True
   b) False
3. Some important vectors belong to this genus.
   a) True
   b) False
4. All *Aedes* & *Ochlerotatus* spp have banded legs.
   a) True
   b) False
5. Some characteristics used in identification can be difficult to see.
   a) True
   b) False

Section 9: Anopheles

1. Distinguishing characteristics of *Anopheles* spp include:
    a) Palpi as long as proboscis, scutellum rounded
    b) Palpi as long as proboscis, tri-lobed scutellum
    c) Short palpi, scutellum rounded
    d) Short palpi, tri-lobed scutellum
2. Several *Anopheles* spp have patterned wings that are used in identification.
    a) True
    b) False
3. *Anopheles* spp tend to sit on surfaces with their abdomen elevated.
    a) True
    b) False
4. There are no saltmarsh *Anopheles* spp.
    a) True
    b) False
5. *Anopheles* spp have complexes that contain species that cannot be told apart morphologically.
    a) True
    b) False

Section 9: Anopheles

1. Distinguishing characteristics of *Anopheles* spp include:
   a) Palpi as long as proboscis, scutellum rounded
   b) Palpi as long as proboscis, tri-lobed scutellum
   c) Short palpi, scutellum rounded
   d) Short palpi, tri-lobed scutellum
2. Several *Anopheles* spp have patterned wings that are used in identification.
   a) True
   b) False
3. *Anopheles* spp tend to sit on surfaces with their abdomen elevated.
   a) True
   b) False
4. There are no saltmarsh *Anopheles* spp.
   a) True
   b) False
5. *Anopheles* spp have complexes that contain species that cannot be told apart morphologically.
   a) True
   b) False

Section 10: Culex

1. Mosquitoes in the genus *Culex* are distinguished by:
    a) No pre- or post-spiracular setae, rounded abdomen, hindtarsomers typically all dark
    b) Both pre- and post-spiracular setae, rounded abdomen, hindtarsomers typically all dark
    c) No pre- or post-spiracular setae, pointed abdomen, hindtarsomers typically all dark
    d) No pre-spiracular setae, post-spiracular setae present, rounded abdomen, hindtarsomers typically all dark
2. Head scale characteristics are used to different subgenera of *Culex*.
    a) True
    b) False
3. *Culex coronator* has bands across the joints on the hindtarsomers.
    a) True
    b) False
4. The *Culex pipiens* complex includes both *Culex quinquefasciatus* (southern house mosquito) and *Culex pipiens* (northern house mosquito).
    a) True
    b) False
5. *Culex territans* has apical bands on its abdomen and feeds on frogs.
    a) True
    b) False

Section 10: Culex

1. Mosquitoes in the genus *Culex* are distinguished by:
    a) No pre- or post-spiracular setae, rounded abdomen, hindtarsomers typically all dark
    b) Both pre- and post-spiracular setae, rounded abdomen, hindtarsomers typically all dark
    c) No pre- or post-spiracular setae, pointed abdomen, hindtarsomers typically all dark
    d) No pre-spiracular setae, post-spiracular setae present, rounded abdomen, hindtarsomers typically all dark
2. Head scale characteristics are used to different subgenera of *Culex*.
    a) True
    b) False
3. *Culex coronator* has bands across the joints on the hindtarsomers.
    a) True
    b) False
4. The *Culex pipiens* complex includes both *Culex quinquefasciatus* (southern house mosquito) and *Culex pipiens* (northern house mosquito).
    a) True
    b) False
5. *Culex territans* has apical bands on its abdomen and feeds on frogs.
    a) True
    b) False

Section 11: Psorophora

1. *Psorophora spp* can be distinguished from *Aedes/Ochlerotatus spp* by (choose all that apply):
    a) The presence of pre-spiracular setae
    b) A rounded abdomen
    c) Apical bands on the abdomen
    d) A pointed abdomen
2. *Psorophora ciliata* and *Ps howardii* are both very large mosquitoes.
    a) True
    b) False
3. Banding on *Psorophora* spp is basal.
    a) True
    b) False
4. Like *Aedes/Ochlerotatus spp*, *Psorophora spp* have a pointed abdomen.
    a) True
    b) False
5. A common name for *Psorophora ciliata* is the shaggy-legged gallinipper because of the long erect scales on its legs.
    a) True
    b) False

Section 11: Psorophora

1. *Psorophora spp* can be distinguished from *Aedes/Ochlerotatus spp* by (choose all that apply):
    a) The presence of pre-spiracular setae
    b) A rounded abdomen
    c) Apical bands on the abdomen
    d) A pointed abdomen
2. *Psorophora ciliata* and *Ps howardii* are both very large mosquitoes.
    a) True
    b) False
3. Banding on *Psorophora* spp is basal.
    a) True
    b) False
4. Like *Aedes/Ochlerotatus spp*, *Psorophora spp* have a pointed abdomen.
    a) True
    b) False
5. A common name for *Psorophora ciliata* is the shaggy-legged gallinipper because of the long erect scales on its legs.
    a) True
    b) False

Section 12: Small Genera

1. *Coquillettidia perturbans* has a rounded abdomen and broad wing scales.
    a) True
    b) False
2. How do you distinguish *Culiseta spp* from *Culex spp* (choose all that apply)?
    a) Presence of setae on the ventral surface of the wing near the body
    b) Rounded abdomen
    c) Short proboscis
3. *Orthopodomyia spp* have hind tarsi that are banded across the joints.
    a) True
    b) False
4. *Toxorhynchites rutilus* is a large mosquito that feeds on blood.
    a) True
    b) False
5. *Uranotaenia spp* have distinctive wing veins that are used in identification.
    a) True
    b) False
6. *Wyeomyia smithii* is commonly called the pitcher plant mosquito.
    a) True
    b) False

Section 12: Small Genera

1. *Coquillettidia perturbans* has a rounded abdomen and broad wing scales.
    a) True
    b) False
2. How do you distinguish *Culiseta spp* from *Culex spp* (choose all that apply)?
    a) Presence of setae on the ventral surface of the wing near the body
    b) Rounded abdomen
    c) Short proboscis
3. *Orthopodomyia spp* have hind tarsi that are banded across the joints.
    a) True
    b) False
4. *Toxorhynchites rutilus* is a large mosquito that feeds on blood.
    a) True
    b) False
5. *Uranotaenia spp* have distinctive wing veins that are used in identification.
    a) True
    b) False
6. *Wyeomyia smithii* is commonly called the pitcher plant mosquito.
    a) True
    b) False

Section 13: *Ochlerotatus japonicus* Update

1. *Ochlerotatus japonicus* was first collected in the US in 1998.
   a) True
   b) False
2. It is thought that *Oc japonicus* might have been introduced as early as 1992.
   a) True
   b) False
3. *Ochlerotatus japonicus* can be distinguished from *Aedes aegypti* and *Ae albopictus* by:
   a) Golden striping on the thorax
   b) No banding on the legs
   c) Silver markings on the body
4. This species is often found in rock pools and rock holes.
   a) True
   b) False
5. *Ochlerotatus japonicus* has been found in Georgia since 2002.
   a) True
   b) False

Section 13: *Ochlerotatus japonicus* Update

1. *Ochlerotatus japonicus* was first collected in the US in 1998.
   a) True
   b) False
2. It is thought that *Oc japonicus* might have been introduced as early as 1992.
   a) True
   b) False
3. *Ochlerotatus japonicus* can be distinguished from *Aedes aegypti* and *Ae albopictus* by:
   a) Golden striping on the thorax
   b) No banding on the legs
   c) Silver markings on the body
4. This species is often found in rock pools and rock holes.
   a) True
   b) False
5. *Ochlerotatus japonicus* has been found in Georgia since 2002.
   a) True
   b) False

Section 14: *Culex coronator*

1. *Culex coronator* is part of a complex of morphologically similar species found in Central and South America.
    a) True
    b) False
2. *Culex coronator* can be distinguished from other *Culex spp* in Georgia by:
    a) White banding across the joints of the legs
    b) Size
    c) Banding around the proboscis
    d) Color
3. *Culex coronator* larvae have a crown of spines before the tip of the siphon.
    a) True
    b) False
4. Larval habitat for this species is not variable.
    a) True
    b) False
5. *Culex coronator* spread out from Texas and arrived in Georgia in 2006.
    a) True
    b) False

Section 14: *Culex coronator*

1. *Culex coronator* is part of a complex of morphologically similar species found in Central and South America.
   a) True
   b) False
2. *Culex coronator* can be distinguished from other *Culex spp* in Georgia by:
   a) White banding across the joints of the legs
   b) Size
   c) Banding around the proboscis
   d) Color
3. *Culex coronator* larvae have a crown of spines before the tip of the siphon.
   a) True
   b) False
4. Larval habitat for this species is not variable.
   a) True
   b) False
5. *Culex coronator* spread out from Texas and arrived in Georgia in 2006.
   a) True
   b) False

Section 15: Mosquitoes of Georgia

1. After being laid or immersed in water, mosquito eggs generally require 2-5 days of incubation before hatching.
    a) True
    b) False
2. What type of mosquito eggs are resistant to environmental conditions and can stay viable for many years?
    a) Eggs laid on permanent water
    b) Eggs laid in soil or in containers
    c) Modified eggs
    d) This doesn't happen at all
3. Most mosquito larvae are predators.
    a) True
    b) False
4. Mosquito pupae need to feed daily.
    a) True
    b) False
5. Only female mosquitoes feed on blood; both males and females feed on nectar.
    a) True
    b) False

Section 15: Mosquitoes of Georgia (cont)

6. The mosquito oviposition cycle consists of:
    a) Host-seeking, blood-feeding, resting, ovipositing
    b) Host-seeking, ovipositing
    c) Flying around and finding a mate
    d) None of the above

7. *Aedes albopictus* are found in every county in Georgia.
    a) True
    b) False

8. There are no longer *Aedes aegypti* in Georgia.
    a) True
    b) False

9. *Anopheles quadrimaculatus* is historically the most important vector of malaria in the eastern United States. This mosquito was eradicated in the 1950s.
    a) True
    b) False

10. Two mosquitoes recently introduced to Georgia are:
    a) *Ochlerotatus japonicus* and *Aedes aegypti*
    b) *Culex coronator* and *Ochlerotatus japonicus*
    c) *Psorophora ferox* and *Ps horrida*
    d) *Ochlerotatus canadensis* and *Culex coronator*

Section 15: Mosquitoes of Georgia

1. After being laid or immersed in water, mosquito eggs generally require 2-5 days of incubation before hatching.
    a) True
    b) False
2. What type of mosquito eggs are resistant to environmental conditions and can stay viable for many years?
    a) Eggs laid on permanent water
    b) Eggs laid in soil or in containers
    c) Modified eggs
    d) This doesn't happen at all
3. Most mosquito larvae are predators.
    a) True
    b) False
4. Mosquito pupae need to feed daily.
    a) True
    b) False
5. Only female mosquitoes feed on blood; both males and females feed on nectar.
    a) True
    b) False

Section 15: Mosquitoes of Georgia (cont)

6. The mosquito oviposition cycle consists of:
    a) Host-seeking, blood-feeding, resting, ovipositing
    b) Host-seeking, ovipositing
    c) Flying around and finding a mate
    d) None of the above

7. *Aedes albopictus* are found in every county in Georgia.
    a) True
    b) False

8. There are no longer *Aedes aegypti* in Georgia.
    a) True
    b) False

9. *Anopheles quadrimaculatus* is historically the most important vector of malaria in the eastern United States. This mosquito was eradicated in the 1950s.
    a) True
    b) False

10. Two mosquitoes recently introduced to Georgia are:
    a) *Ochlerotatus japonicus* and *Aedes aegypti*
    b) *Culex coronator* and *Ochlerotatus japonicus*
    c) *Psorophora ferox* and *Ps horrida*
    d) *Ochlerotatus canadensis* and *Culex coronator*