

## Taxonomic Shortcuts

**Pale bands on the tarsi eliminate all:**

<i>Anopheles</i>	}	= 20 species
<i>Culex</i>		
<i>Culiseta</i>		
<i>Wyeomyia</i>		

**Spots on wing vein 1A can easily separate rubbed specimens of *Anopheles*:**

1. 3 black spots: *bradleyi*, *crucians* or *georgianus*
2. 2 black spots: *perplexens* or *punctipennis*
3. no spots: *atropos*, *barberi*, *walkeri*, or *quadrimaculatus*

**Certain species are easily recognized by one character:**

*Toxorhynchites r. septentrionalis*: curved proboscis

*Aedes aegypti*: scutal markings

*Aedes albopictus*: scutal markings

*Aedes fulvus pallens*: color

*Coquillettidia perturbans*: hindtibial pale band

**There are only 7 species that have a distinct pale band or area on the proboscis**

*Ochlerotatus mitchellae*

*Ochlerotatus sollicitans*

*Ochlerotatus taeniorhynchus*

*Coquillettidia perturbans*

*Psorophora ciliata*

*Psorophora columbiae*

*Psorophora discolor*

**There are only 4 species that have wide pale tarsal bands that cross the joints:**

*Ochlerotatus atropalpus*

*Ochlerotatus canadensis*

*Orthopodomyia signifera*

*Orthopodomyia alba*

**Wing with pale and dark scales selects 9 species:**

*Ochlerotatus atropalpus*: one pale spot on costa

*Ochlerotatus sollicitans*: entire wing speckled

*Ochlerotatus sticticus*: base of costa may be speckled

*Coquillettidia perturbans*: entire wing speckled

*Culiseta inornata*: front 2 veins speckled

*Orthopodomyia signifera*: some speckled and some clumped

*Orthopodomyia alba*: same as signifera

*Psorophora columbiae*: entire wing speckled

*Psorophora discolor*: in distinct patches

*Anopheles* – *bradleyi*, *crucians*, *punctipennis*

## MOSQUITO SHORT CUTS

### **CULEX**

#### ***Culex salinarius***

- small brown mosquito with blunt rounded abdomen
- base of mid-lobe of scutellum with patch of small brown scales<sup>\*</sup>
- abdominal segment 8 covered in orange or bronze scales<sup>\*</sup>
- venter of abdomen covered in orange or bronze scales<sup>\*</sup>
- abdominal segments II and III without or with very narrow pale (bronze) bands

#### ***Culex pipiens complex***

- brown mosquito with blunt rounded abdomen
- base of mid-lobe of scutellum with long pale white or cream scales<sup>\*</sup>
- abdominal seg. 8 with dark and white scales<sup>\*</sup>
- abdominal tergal pale bands yellow and broadest in middle and much narrower laterally, particularly on segments 2- 4<sup>\*</sup>
- scutal scales long, curved and light brown (tan) and scale vestiture looks scruffy.<sup>\*</sup>
- venter of abdomen with black and white scales

#### ***Culex restuans***

- brown mosquito with blunt rounded abdomen
- base of mid-lobe of scutellum with long pale white or cream scales<sup>\*</sup>
- scutum with fine dark brown scales with neat appearance and with two small white spots (most specimens)- even 1-2 pale scales in the area of the spots indicates this species<sup>\*</sup>
- abd. seg. 8 with black and white scales<sup>\*</sup>
- abd. tergal pale bands white and broad all the way across segment (most of the time)<sup>\*</sup>
- venter of abdomen with black and white scales

## **CULEX (Cont.)**

### ***Culex erraticus***

- small dark brown or nearly black mosquito<sup>\*</sup>, with blunt rounded abdomen
- sclerites on side of thorax dark (milk chocolate) brown<sup>\*</sup>
- head with several rows of broad round scales immediately behind the eyes near the midline<sup>\*</sup>
- white scaling on abdominal segments variable or absent
- with distinct white scale patch on the middle of the mesepimeron

## **CULISETA**

### ***Culiseta melanura***

- dark brown with blunt rounded abdomen
- length of proboscis 1.2 times the length of forefemur<sup>\*</sup>, and usually curved downward on distal half (in fresh specimens)
- with prespiracular setae<sup>\*</sup>
- underside of base of wing with small patch of setae on base of subcosta<sup>\*</sup>
- forecoxa and propleuron with many very long black setae

## **ANOPHELES**

### ***Anopheles punctipennis***

- wing with pale yellow or white subcostal pale spot on leading margin of wing and pale spot at tip of wing\*
- vein 1A with two dark scale patches\*
- palpi entirely dark scaled\*

### ***Anopheles crucians complex*** (= at least 6 species)

- Wing without subcostal pale spot on leading margin of wing, but with pale spot at tip of wing\*
- vein 1A with 3 dark scale patches\*
- palpi with bands of white scales\*

### ***Anopheles quadrimaculatus complex*** (= 5 species)

- wing entirely dark scaled with 4 dense patches of scales where wing cross-veins occur\*
- length of black scutal setae much less than 0.5 width of scutum\*
- with white frontal tuft of scales on top of head between the eyes\*
- palpi entirely dark scaled
- fore-coxa without small black scales (or 1-2)

### ***Anopheles barberi***

- small delicate species with wings entirely dark scaled (no dense scale spots\*)
- length of black scutal setae long, at least 0.5 width of scutum\*
- frontal tuft usually black\*
- palpi entirely dark scaled
- fore-coxa without small black scales (or 1-2)

## **AEDES**

### ***Aedes albopictus***

- distinct black and white mosquito with sharp pointed abdomen
- broad white basal bands on the hindtarsi\*
- with narrow median-longitudinal white stripe on the scutum\*
- tip of palpi white scaled
- abdominal terga with basal white bands
- clypeus without white scales
- midfemur without anterior narrow white stripe
- proboscis dark scaled
- wings dark scaled

### ***Aedes vexans***

- brown mosquito with sharp pointed abdomen
- with narrow pale basal bands on hindtarsi\*
- abdominal terga with basal white bands notched at midline\*
- proboscis dark scaled
- wing dark scaled

## **OCHLEROTATUS**

### ***Ochlerotatus atlanticus/tormentor*** (females cannot be separated)

- brown mosquito with sharp pointed abdomen
- with narrow median-longitudinal white stripe on scutum\*
- hindtarsi entirely dark scaled\*
- abdominal terga without basal pale bands, but with lateral white patches

### ***Ochlerotatus japonicus***

- brown mosquito with sharp pointed abdomen
- with narrow median-longitudinal gold stripe on scutum , plus other longitudinal stripes of gold scales\*
- hindtarsomeres 1 - 3 with broad white pale basal bands, 4 - 5 entirely dark\*
- abdominal terga without basal pale bands, but with very distinct silver lateral patches\*
- base of hindfemur with black band\*
- palpi entirely dark

### ***Ochlerotatus triseriatus***

- black and white mosquito with abdomen sharp pointed from dorsal view, rounded from lateral view
- abdominal segments 6 - 7 flattened laterally like a flea\*
- scutum with broad dark brown – black median area, and white lateral areas on the anterior half\*
- tarsi entirely dark scaled
- palpi entirely dark scaled
- sides of thorax with large patches of broad white scales

## **OCHLEROTATUS (Cont.)**

### ***Ochlerotatus taeniorhynchus***

- small black and white mosquito with sharp pointed abdomen
- proboscis with narrow white band\*
- wing scales all dark\*
- abdomen with basal pale bands and lateral patches, but without median-longitudinal pale stripe the length of the abdomen\*
- scutum with black scales
- hindtarsi with moderately broad basal white bands, 5 entirely white
- hindtarsomere 1 without median pale band

### ***Ochlerotatus sollicitans***

- large brown and white mosquito with sharp pointed abdomen
- proboscis with broad white band\*
- wing scales mixed dark and white\*
- abdomen with basal pale bands and with median-longitudinal pale stripe the length of the abdomen\*
- scutum with orange-brown scales
- hindtarsi with broad basal white bands, 5 entirely white
- hindtarsomere 1 with broad median pale yellow band

## **PSOROPHORA**

### ***Psorophora ferox***

- dark purple mosquito with sharp pointed abdomen
- hindtarsomeres 4 – 5 entirely white scaled\*
- scutum purple with scattered gold scales\*
- subspiracular area with white scale patch\*
- abdominal tergum I with median patch of purple scales\*
- proboscis without pale band
- abdominal terga without pale bands, but with apical-lateral pale patches
- wing scales all purple



***Psorophora columbiae***

- large black and white mosquito with sharp pointed abdomen
- hindfemur with narrow preapical pale band\*
- proboscis with broad pale band\*
- wing scales large and mixed black and white\*
- some abdominal terga with complete apical pale bands\*
- scutum mottled black and paler colors without distinct pattern
- hindtarsi with broad basal pale bands
- hindtarsomere 1 with median pale band
- fore- and midfemora and tibiae black and white speckled