Mosquito Species

Utah provides a wide diversity of habitat for living organisms from high alpine mountains over 13,500' to Upper Sonoran desert in SW corner of Utah 2100'. This also provides numerous niches for mosquitoes that may live in very temporary water causes by precipitation, snow melt or irrigation as well as more permanent waters supplied by springs, high water tables, marshes and lakes. There have been about 50 different species of mosquitoes identified throughout the state of Utah. Utah County has been the source of over 20 of those species. The species that are most troublesome in the lower elevations of Utah Valley are about 10 species throughout the year. An excellent identification guide to The Mosquitoes of Utah by Lewis T. Nielsen, Robert J. Brand & Glen C. Collett may be obtained from the Utah Mosquito Abatement Association at 2020 North Redwood Road, SLC, UT 84116, http://www.umaa.org

Listed below are some of the more persistent species that are found in the lower elevations of Utah County.

Flood water mosquitoes

These are mosquitoes that can complete rapid life cycles in a small amount of temporary water from rain fall or excess irrigation water. Several of these species are very aggressive biters. Female mosquitoes can deposit eggs that are resistant to drying on moist soil. They will hatch later when the next flooding occurs. Single brood species lay just one batch of eggs. Multiple brooded mosquitoes produce as many as ten generations throughout the season. Adults are recognized by a pointed abdomen. Illustrations follow on last page. We have noted a decrease in flood water species lately probably linked with declining farm ground, increased sprinkling instead of flood irrigation, weather patterns and larval treatment.

Aedes vexans-multi-brooded, dark colored species, commonly occurring in areas of excess irrigation, persist from April-Oct This species comprised 50% of our trapped mosquitoes in 2003-4, the past two years it has been under 2%.


Excess Spring runoff

Ochlerotatus dorsalis- multi-brooded, light colored species, prefers alkaline waters with salt grass, adults fly from March-Oct, aggressive biter. This species comprised 10% of our trapped mosquitoes in 2003-2004 and has declined to 1-2%. Irrigation pools from excess runoff can concentrate incredible numbers of mosquitoes as they begin to dry up.

Note one dipper full that contains thousands of larval mosquitoes can soon be transferred into an incredible army of attacking adults looking for a blood meal..

Ochlerototus increpitus-single brooded, dark colored, late spring species, develops in trapped waters created by fluctuations of Utah Lake, can be noxious pests of golf courses and nearby inhabitants, disappears by early July. Adults have broad distinct white bands on legs and even white bands on abdomen. This species has increased to over 5% last year from less than1%. The heavily vegetated stagnant water near the edges of Utah Lake provides a more consistent breeding area during dry years for this species.

Ochlerotatus nigromaculis-multi-brooded, dark, species, has broad banded legs and proboscis. It prefers low areas that accumulate rain/irrigation water, may complete life cycle in 5 days during summer, strong fliers and aggressive biters, attracted to legs when walking through low vegetation. This species is well known to mosquito personnel by occasional late summer attacks in communities during 2003, when 14% of our traps were this species. The past 4 years it's numbers have been very low.

Permanent/semipermanent water mosquitoes

These species live in water that persists throughout the season and is often fed by springs, wells or high surface water. Several broods are produced throughout the year. Adults often hibernate in outbuildings, cellars, houses, under bridges, in culverts, etc. Their abdomen is rounded contrasting with a pointed tip of our floodwater species. Several of these species are important disease vectors.

Anopheles freeborni- Larvae of this species mostly live in pools fed by spring water or in algal growths near the edge of streams. Female adults have two long palps nearly as long as the biting proboscis which is an important distinguishing feature. The wings have 4 dark spots of scales if they are not too worn. Historically, this species has been an important vector of malaria in the west, including Utah. We trap it commonly but it traditionally is less than .5% of our catch.

Culex erythrothorax- This species develops in deeper water of heavy vegetation similar to the pictured waters of Utah Lake for Oc. increpitus. Larvae usually over winter and adults begin to be common in our traps from July-mid Sept. Adults have a redish/yellow thorax with no banding on legs and proboscis. They can be aggressive biters in late afternoon to early evening particularly when disturbing vegetation in this habitat. Our traps set near Utah Lake were particularly ladened with this species during the late summer of 2007.

Culex pipiens- known as the common house mosquito, this species is commonly concentrated in residential areas. Larvae live in very organic polluted waters that might contain dead leaves and grass clippings as neglected ornamental pools, catch basins, trapped water in buckets, planters, old tires etc. Many of these habitats can be eliminated by a quick survey of ones yard. These adults are brown with no banding on legs, abdomen or proboscis. Females mostly bite birds but occasionally will feed on humans for a blood meal. They are an important vector of West Nile Virus among birds.

Neglected ornamental pool

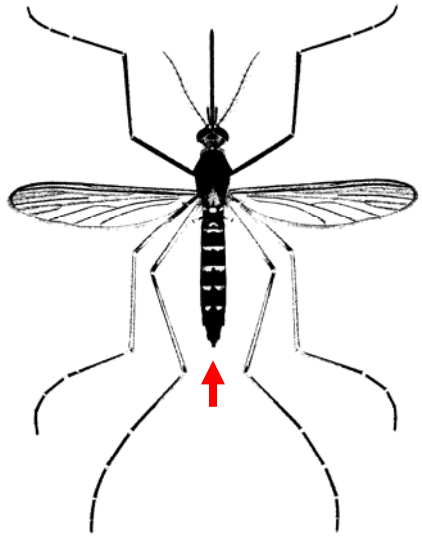
Catch basin

Neglected swimming pool

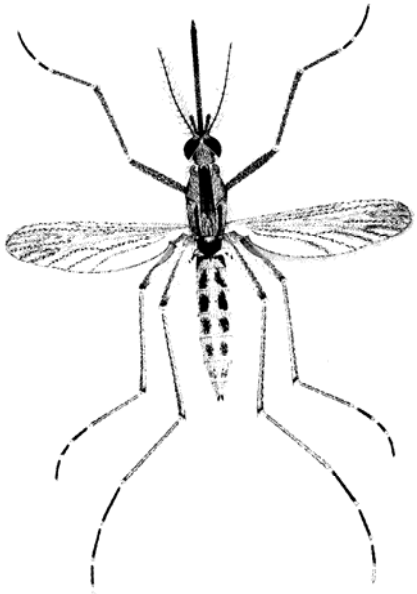
Culex tarsalis- This is the major mosquito species responsible for the transmission of WNV to humans in Utah County as well as Western and St. Louis Encephalitis that affect horses and humans. This dark species has broad white banded legs and a banded proboscis. See illustration. Females overwinter and begin to be active in the spring feeding mostly on birds. Multiple broods produce larvae from spring to fall. Host preference changes as summer progresses and females feed heavily on mammals. It is an aggressive biter from dusk to dawn. Light trap data have shown that numbers begin to increase significantly during hot temperatures in late June, peak in late July and remain high till late August. During 2003-4 seasons, this species comprised 13% of mosquitoes trapped. The last three years there has been a dramatic increase averaging nearly 50% of our trapped mosquitoes. Precautions must be taken to protect oneself with adequate clothing, repellants containing DEET when involved in outdoor evening activities.

Culiseta inornata-This is a large, wide spread, brown species with unbanded legs, and a long, decurved proboscis. Under a microscope the scales on legs appear speckled like salt and pepper. Females prefer large mammals as horses and cows, but will occasionally land on humans.. Trapping data has shown this species historically around 1%, the last two years we have averaged 6% of our total mosquitoes for this species. When we receive calls saying the mosquitoes are so much bigger than normal, this is the species usually involved

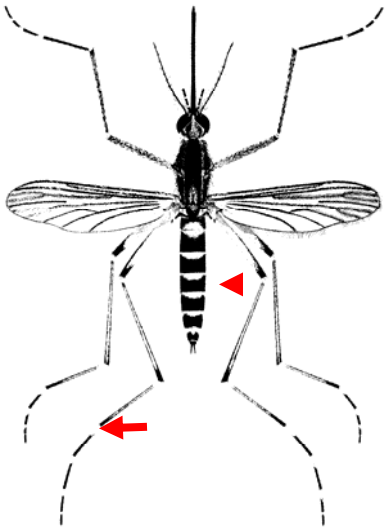
Common Utah County Valley Mosquitoes



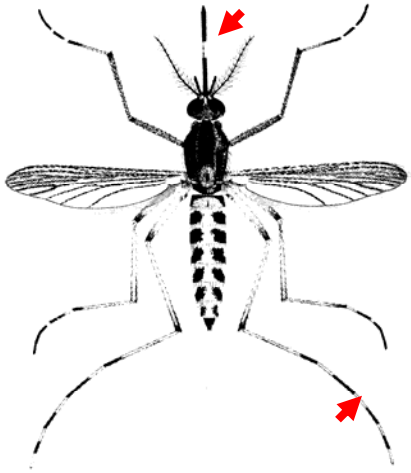
Aedes vexans



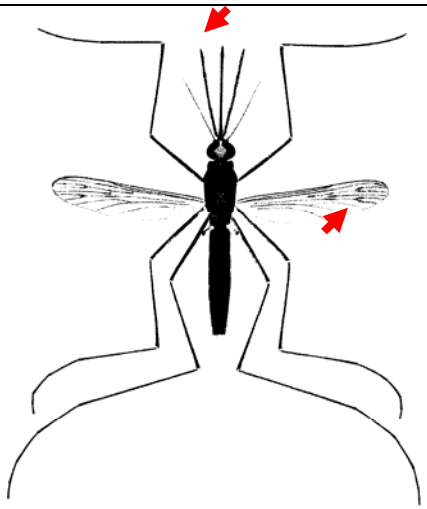
Oclerotatus dorsalis



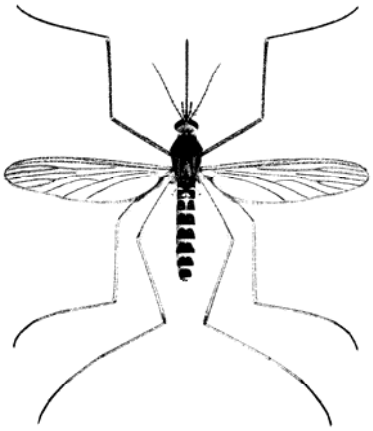
Ochlerotatus increpitus



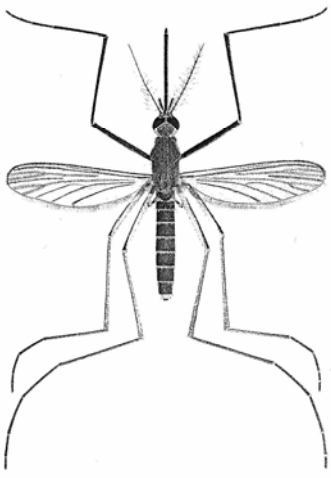
Ochlerotatus nigromaculis



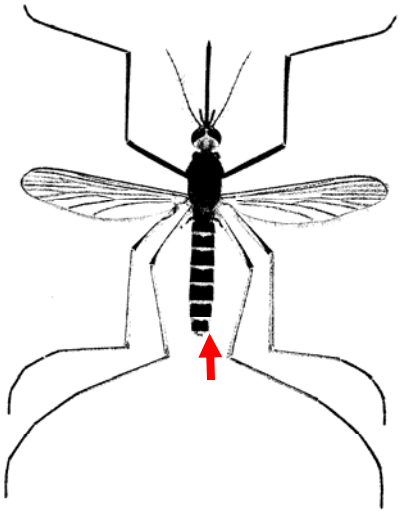
Anopheles freeborni



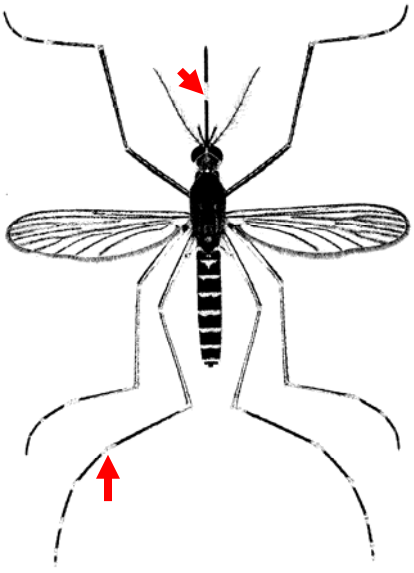
Culiseta inornata



Culex erythrothorax



Culex pipiens



Culex tarsalis