

# Sierra Club

## Wilderness Basics Course 2006

### Insects and other Crawling Things

Arthropods are those animals with an external skeleton, the body is covered with a relatively hard outer layer (of chitinous material) and the internal muscle attachments are to that layer, not to some internal skeleton (as in humans). Arthropods include a variety of critters, those of interest to us in the Wilderness Basics course are insects (three body segments and six legs), spiders (two body segments and eight legs), ticks (essentially a single body segment with eight legs), and a few other groups. Aside from the obvious things such as grizzlies and rattlesnakes, the insects and their kin probably cause more anxiety, real (ooh that sting itches) or imagined (Is that thing poisonous??? Are you sure????), than does any other wildlife form.

Insects and their kin are, as a group, a fascinating lot. The keen observer will see many things to peak his or her interest and fascination. Included below, therefore, are a number of references for additional information. Hogue's *Insects of the Los Angeles Basin* covers virtually all of the common forms in San Diego County and I highly recommend it for any book shelf.

For those insects and others that would (and do) occasionally take a nibble, remember "ART," the three mandates:

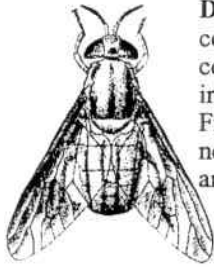
<b>A</b> <b>V</b> <b>O</b> <b>I</b> <b>D</b>	Remember where they occur and, when possible, don't place yourself in their path. Placement of the camp site with respect to nocturnal insects can be as important a consideration as any other.
<b>R</b> <b>E</b> <b>P</b> <b>E</b> <b>L</b>	Go ahead and use a DEET based repellent. Used with intelligence and in moderation there are no adverse human health effects.
<b>T</b> <b>R</b> <b>E</b> <b>A</b> <b>T</b>	Always carry a pump extractor and have a little mineral oil available. At home, don't forget the ice. Anti-histamines are also highly effective.

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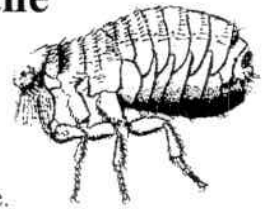
#### References

- Dunkle, Sidney W. 2000. *Dragonflies through Binoculars*. Oxford Univ. Press, New York; \$29.95 paperback [exquisitely illustrated volume, covers all of the North American species]
- Eisner, Thomas. 2003. *For Love of Insects*. Harvard Univ. Press. \$29.95, hardback [Eminently readable, this is a fascinating summary of a life's work sorting out the incredible ways in which spiders and insects conduct constant warfare — attack & defense!]
- Evans, Arthur V. et al. 1996. *An Inordinate Fondness for Beetles*. Henry Holt and Co., New York, \$40.00 hardback [highly readable and informative book, recommended]
- Evans, A. V. and J. N. Hogue. 2004. *Introduction to California Beetles*. Univ. of Calif. Press, \$16.95 softback [A focus on the most common and widely distributed insects of California, eminently readable introduction to the Coleoptera]
- Glassberg, Jeffrey. 2001. *Butterflies through Binoculars: The West*. Oxford Univ. Press., New York, \$19.95 paperback [exquisite volume, all the western species are beautifully illustrated and identified]
- Hogue, C.L. 1993. *The Insects of the Los Angeles Basin*. Nat. History Mus. of Los Angeles County. \$27.95 paper [this is the best guide available to the San Diego County (and southern California in general) insects]
- Hölldobler, Bert and E. O. Wilson. 1994. *Journey to the Ants*. Belknap/Harvard, Cambridge. [a wonderfully readable treatment of this most common group of insects. Recommended reading to all]

## Summary of the Problem Arthropods in the San Diego County Back Country



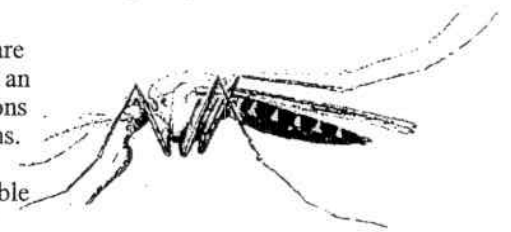
**Deer Flies** are a particularly nasty group of colorful, biting flies. Generally amber colored with variegated wings and brilliant iridescent eyes (if you look that close). Frequently found near water, the bite is notable. They are relatively slow fliers and are easily swatted.



**Fleas** from your pet dog or cat are troublesome but are not our concern here.

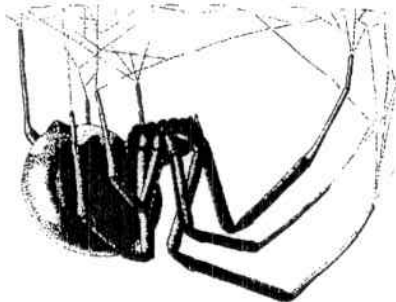
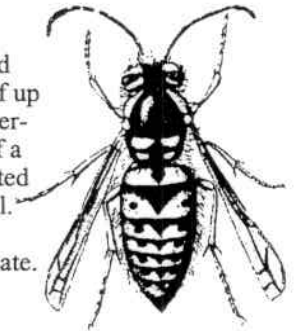
The fleas of certain wild rodents, especially ground squirrels, have been known to carry bubonic plague. The plague organism is rare in San Diego County, but is found more regularly to the north.

**Mosquitoes** of several species are abundant in our area. Primarily an irritant, some do on rare occasions carry diseases harmful to humans. Generally more common near water, they can travel considerable distances and a suitable "water" source can be as small as a tin can.



**Harvester Ants** build low, conical mounds one to three feet in diameter. The mounds are kept devoid of any vegetation and the periphery of the mound is frequently littered with the discarded husks of seeds and other plant parts. Found in all habitats, the sting is particularly painful, especially in sensitive individuals. These are large ants, may be black or rusty in color, and are generally found in drier locations.

**Yellow Jackets** are one of our more common wasps, especially in the fall and especially in the mountains. Colonies of up to 15,000 individuals live generally underground. Very aggressive and capable of a severe sting, additional wasps are attracted to the victim by an aggregation chemical. These are the wasps at your picnic table trying to steal the hamburger off your plate.



**Black Widow** spiders are common throughout much of San Diego County. They can be frequently recognized by their large (about a foot or so across) "random" strand webs. Not aggressive, bites are generally inflicted when one accidentally handles a spider by reaching into their hiding place. The venom is particularly virulent and medical treatment should be sought immediately.

**Honey Bees** have always been a minor concern, who hasn't had at least one bee sting. However, the invasion of the United States by a genetic variety — the Africanized or "killer" bee — has increased the odds. The so-called "Killer" Bees will more aggressively defend the hive and will more aggressively pursue an intruder (up to a 1/4-mile). At present found only very sparsely in eastern San Diego County, the Africanized form seems to be blending with the local form of the honey bee.



**Scorpions** are found throughout the southwest, generally in drier locations and under rocks, sticks, logs, bark and the like. Of the 66 or so species, most (including our local species) are only mildly dangerous, stings may be painful but last only an hour or so. There is, however, a virulent species in Arizona and one should be cautious outside of our local area. Scorpions are nocturnal and many fluoresce under a black light.

**Ticks** are abundant throughout the foothills and mountains of southern California. The most common species, the Dog Tick, rarely carries diseases transmitted to humans. However, a particularly small species, the Western Black-legged Tick (*Ixodes pacificus*) carries Lyme Disease. This latter tick only occurs in areas of high humidity, such as the dense growth along stream beds. It is also our only tick that inhabits lizards. Ticks are best removed by emersion in mineral oil.

