

Safety Note #86

## FIELDWORK SAFETY: BITING AND STINGING INSECTS



Information available from the National Institutes of Allergy and Infectious Diseases indicates more than 40 fatalities annually can be attributed to severe venom allergic reactions (called anaphylaxis) from insect bites or stings. Common California biting and stinging insects include ticks and chiggers, centipedes, mosquitoes, black, deer, and horse flies, spiders

including black widow and brown species, fire ants, midges, scorpions, bees including Africanized honey bees, wasps, and hornets.

Aside from allergic reactions, biting and stinging insects cause nuisance bites and stings that can result in tissue swelling, infections of bite and sting sites, skin lesions, itching, dermatitis, and pain or burning sensations.

Symptoms of a severe venom allergic reaction include large areas of itching and hives, difficulty breathing, dizziness, excess sweating, nausea, swelling of the tongue or throat, and possibly a rapid decrease in blood pressure resulting in loss of consciousness.

The following fieldwork precautions should be taken for preventing insect bites and stings:

- The best defense against biting and stinging insects is to not be bitten by one. Therefore, avoid conducting fieldwork during peak biting or stinging insect activity times (usually early morning and evening hours) and in favorable biting or stinging insect habitat such as wetlands, along streams, lakes, or oceans, and moist shaded portions of wooded, brush-covered, or grassy areas. Also, avoid contact with insect nests, swarming insects, and ant mounds.
- Wear a long-sleeved shirt and long pants with boots in the field. Tucking your pants into your boots or socks helps prevent biting and stinging insect access to your skin.
- Use insect repellants containing compounds such as DEET (repels insects) on exposed skin and permethrin (kills many insects on contact) on clothing only.
- Closely look for insects or insect activity before placing your hands on objects such as rock outcrops or trees or picking up objects from the ground (i.e., rocks, plants, leaves, remote monitoring equipment, etc.)
- Thoroughly inspect the area where you intend to sit, particularly around stumps, logs, boulders, or rock outcrops.
- If you experience an insect bite or sting, wash the wound with soap and water, apply an antiseptic, and cover the wound with a band aid or clean dressing. Carefully remove stingers from skin by using tweezers and then clean and dress sting wounds.
- Never scratch an insect bite or sting.
- Promptly seek professional medical attention if you suspect you are experiencing severe venom allergic reaction symptoms.
- Let your field colleagues (and supervisor) know in advance if you are allergic to insect bites or stings so they can respond appropriately if you are bitten or stung.