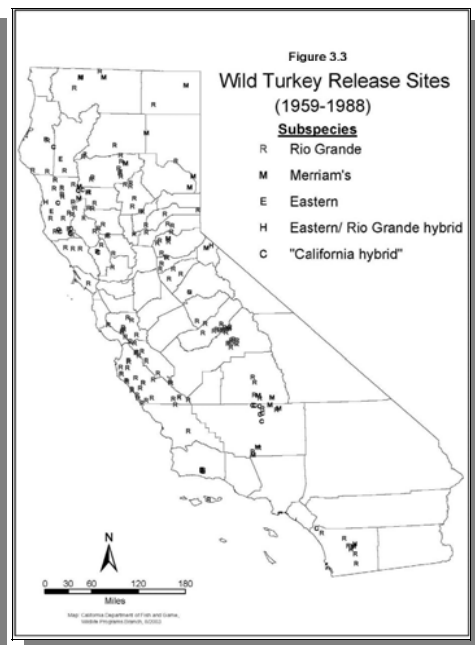
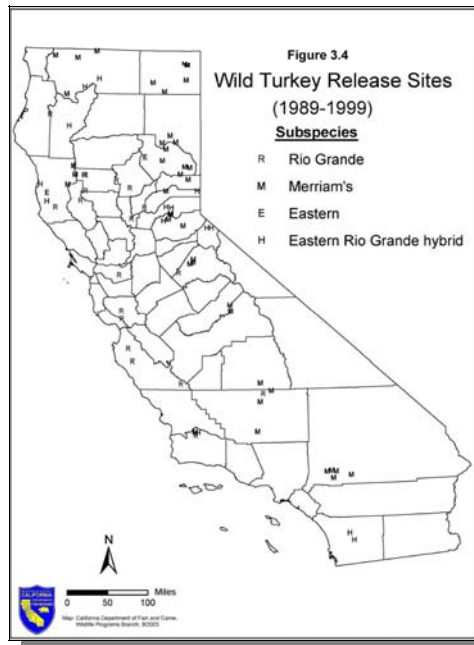


striking increase in complaints regarding wild turkeys. These holiday specialists get into gardens, and landscaping, and aggressively dig around for tidbits; combine this with their excrement, as well as damaging the finish on cars—these aggressive panhandlers are increasingly becoming an urban problem. Even though California Dept. of Fish & Game (CDFG) suggests this is an opportunity for hunting—do not try this in urban areas, you may find yourself on the receiving end of a police SWAT team.

The wild turkey is an introduced non-California native bird whose established population is traced to an aggressive program of introductions by CDFG, beginning in 1965. Today they are well established throughout the state. It is an odd situation where CDFG introduced various species of these non-native sub-species, which may have a negative affect on our native ground nesting birds.

According to CDFG's "Strategic Plan for Wild Turkey Management"; they will assist the public in resolving conflicts with wild turkeys that are causing a nuisance, and will advise the public on ways to prevent or minimize nuisance-related problems for routine complaints, and it will investigate those that are chronic and persistent. Turkeys that are acting aggressively toward people may be destroyed at the discretion of the CDFG, or any law enforcement agency.



Through this process, the CDFG has a goal to better understand the types of nuisances turkeys are causing and the efficacy of preventative measures recommended to the public.

Interestingly enough, we used to have a California turkey in the Pleistocene geological age (10,000-five million years ago), but its last residence was in the La Brea tar pit area, and is only found as geological specimens! This does not seem to give good reason for introduction of all the various sub-species of turkeys. The habitat niche they once inhabited has since been taken over by other California native species. It seems turkeys are

great competitors for habitat, and may eventually displace other species of avifauna. CDFG should be on the forefront of preventing this type of native-species displacement. It would certainly be novel to go back a few million years and experience California at its' feral best, but I must postulate that those days are dead and gone.

In total, wild turkeys are established in an area estimated to comprise 29,168 square miles (18.5 %) of California, but many areas have yet to have a census taken, and these turkeys are expanding at a vigorous rate. What about the Canadian geese?

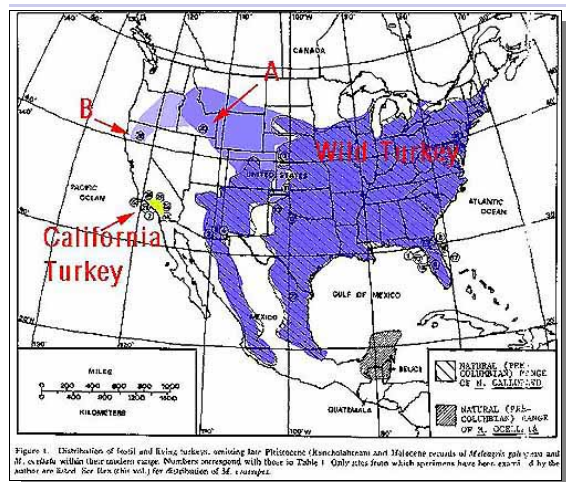


Image from: www.johnsonmill.com/images/Wild%20Turkeys%20



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Alameda County Vector Control Services District



Our Mission:
 Prevention of Vector Borne Disease in Alameda County

Our Mission: Prevention of Vector Borne Disease in Alameda County



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West Nile Virus in California 2006

West Nile Virus (WNV) had a reduced presence in California during 2006. Even with preparation, mosquito and vector control services throughout the State, and public participation, over 276 WNV cases have been detected, with 7 WNV related deaths (2005 = 19). There were over 58 WNV infected horses, with 23 fatalities. The horse vaccine usage increased, and the detected horse cases are only 10% of last year. There were over 3,000 WNV infected birds (and other animals) detected through dead bird testing during 2005, but in 2006, only 1,375 WNV infected birds were detected.

Are you tired of West Nile Virus? Well, I am and certain most people are, and hope the decline in cases continues!

Wild Turkeys

Over the last few years, the district has received a

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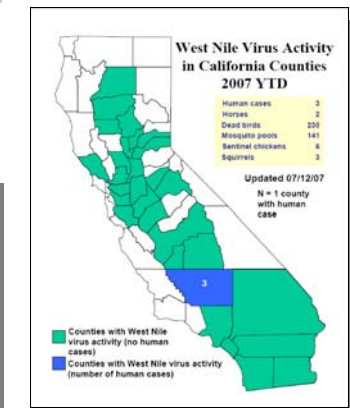
Ninety-three blood donors were detected with WNV infection by screening at blood banks, and 40 of these donors later developed symptoms. This gives you a group of 43% that had symptoms from the infection. Of the 272 documented WNV cases, 81 (30%) have been classified as West Nile Neuroinvasive Disease (WNND), and 186 (68%) as West Nile Fever; five were not classified. What this indicates is that 30% of the classified cases were of the very severe "encephalitis" type infections that often have long-term residual effects.

The median age of all cases is 49 years (range: 8-86 years). These are a lot of statistics, but they are meant to help illustrate who is most at risk, and

you would have to say "everyone" is at risk for WNV. The fatalities fell into a large group of elderly Californians that are at greater risk for WNND. This is not to say West Nile fever is much less of a problem, when in fact many victims take several weeks, or months to recover from this malady.

What everyone would like to know is "what does the 2007 mosquito season have in store for us?" This is difficult to predict, but we do know that in Alameda County we have been spared (so far) an outbreak of human infection (one case 2006), when eighty miles away in the Sacramento Valley region there were over 300 cases, and forty miles south in Santa Clara County there were five.

As of this writing (7/13/2007), California has three human WNV cases, 141 positive mosquito samples, 230 positive dead birds, 2 equine cases, 6 positive sentinel chickens, and three tree squirrel. We are just beginning the mosquito season; remember to bring your mosquito repellent with you if you journey outside for work or play!



Africanized Honey Bee's (AHB): What Are They Up To? (Colony Collapse Disorder CCD?)

Several years ago, we were tracking the AHB as they approached the US, and as they migrated into California. Fortunately, the perceived problem of massive stinging attacks resolved itself by the efforts of the pest control industry, local and state governments, beekeepers, and beekeeper associations, and the bees themselves. We still have an "Alameda County Africanized Africanized_Honeybee Response Plan." This response plan actually took a lot of effort by our AHB task force. The task force was comprised of representatives from; Vector Control, Alameda County Agriculture Department, Alameda County Fire Department, local pest control operators, beekeepers, Alameda County Cooperative Extension, and many others.

After the harrowing journey from Africa, to Brazil, and then to the US, these bees finally seemed to have found home here in California. There is still the occasional stinging incident, and dogs sometimes get themselves into trouble with their barking (several have been killed by the AHB's, mainly due to their being fenced in and not able to escape the attack), but the AHB seems to have found their niche in California. These, sometimes reactive and testy bees have been in use for pollination over the last few years, and are considered hardy—hard workers. Over the past several years, they have been brought in from Arizona for almond pollination around the Modesto area. So far, there does not seem to be a problem in this usage. Could they be the saviors of the beekeeping industry?

You may have heard about CCD (*colony collapse disorder*), which is the current dilemma plaguing commercial beekeeping. This is when thriving hives collapse, and the honeybees seem to just fly away. Some of the beekeepers have had a 30% or more loss of hives. This can be devastating to farmers who have crops that need these busy pollinators. There are about 90 fruit and vegetable crops worldwide that honeybees efficiently pollinate, and in the US, the economic value is \$14.6 billion.

There is ample speculation as to the cause of CCD, from cell phones, stress, to new pesticides such as *neonicotinoids*. The research is still ongoing.

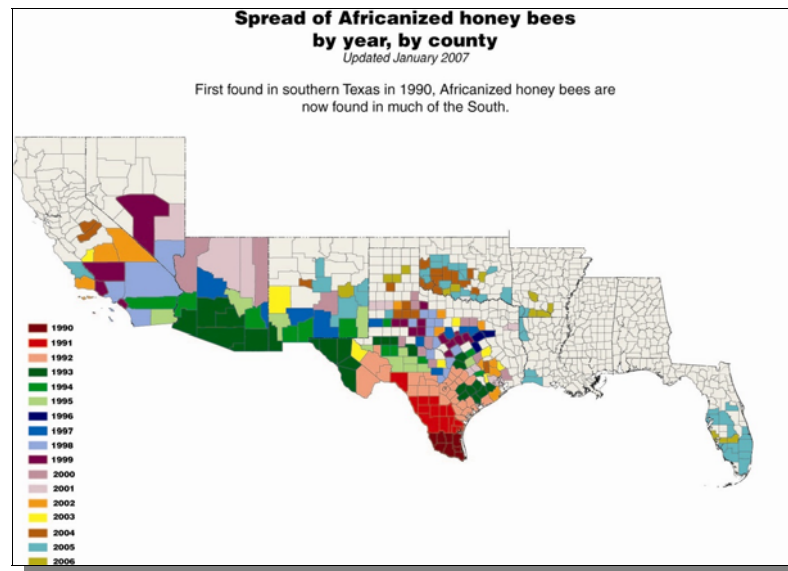
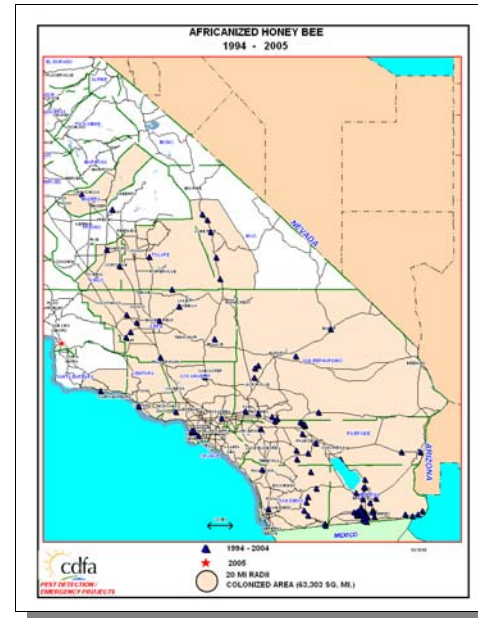
Scientists from Edgewood Chemical Biological Center and University of California, at San Francisco, identified both a virus and a parasite that are likely behind the recent sudden die-off of honey-bee colonies. If this is the reason for CCD, we will find out soon enough. There is some anecdotal evidence that AHB's are resistant to CCD, and in the past years, there has been evidence that the AHB has a resistance to the varroa mite, that devastated European honeybees (EHB) a decade ago. If they are resistant to CCD, the AHB may make a suitable replacement, as long as they maintain a good disposition.

Every time the spotlight is placed on honeybees, new insight is gained into the behavior, and the lives of these beneficial insects.

Conversely, EHB's and AHB's are immigrants to the Americas. Several years ago when the varroa mite hit our local EHB population, the resurgence of our native pollinators (bees, wasps, flies) was great to observe. The EHB has out-competed our natives, and compressed their niche so much; many are not often seen on our blooms.



Varroa mite on thorax of honeybee



Swimmers Itch, part II from research by: Cynthia-Bartus-Jepson, Lucia Hui and David James

Back in 2005, from the Crown Beach area in Alameda, were reported 80-90 cases of swimmers itch. In 2006, there were only a handful of cases reported to the Environmental Health Department. This year we have received 13 case reports of "swimmers itch" from Alameda City beaches. This schistosome, or rather their cercariae, are tadpole-shaped parasitic larva of a trematode (parasitic flatworms) worm, and are quite small (1/32 in.), and have a tendency to burrow into skin follicles as the skin dries.

There are a wide variety of these parasites, and fortunately, the variety we have at Alameda beaches primary host are birds, and the intermediate host an aquatic bubble snail. We are not a potential host; *Gigantobilharzia sp.* die soon after entering our skin. These cercariae, while in the skin produce a small pimple-type rash where they enter, and cause an itch that usually abates in a few days—at most.

Beginning on June 9th 2007, our Department, and East Bay Regional

Park District (EBRPD) received 13 reported incidents of swimmers itch, and the last report was on June 23rd. Hopefully this will be the end for this year, but in the recent past there have been cases reported in September.

Both the bubble snail host and the schistosome are recently imported invasive species, most likely introduced through international shipping. The question is; are the schistosomes from the snails, or from animals such as seagulls, or Canadian Geese, that may travel around the world spreading the schistosome through their excreted feces, which lands in shoreline waters? This situation is still being researched to determine the exact origin. With genetic typing, this and other disease-causing organisms will be able to be tracked down to their place of origin.

What is to be done, you ask? Just a little behavior modification should fill the ticket. The initial part is already being done by "postings" at affected beaches, and advice to shower after swimming, and towel drying of the

skin. Some other forms of swimmers itch have caused problems at cinch lines of swimming apparel, such as the waist, but this does not seem to be the case with this wee beastie.

During the July 4th holiday week the shoreline parks were packed and dozens more warning placards were posted. The EBRPD staff reported showering after swimming or wading was non-stop all day.

Interestingly enough, the windsurfer kiosk has not reported any incidents of swimmers itch. This could be that most windsurfers wear wetsuits; now that is an idea!

There are also "sentinels" from Lum Elementary School that are committed to appraising the school nurse of any itchy rashes, acquired in their beach-combing, and they will report these to EBRPD and Alameda County Department of Environmental Health.

We have been collecting the mud snails and sending them off for testing to Sara Brant, Ph.D. a researcher at the University of New Mexico. So far, there have been many snails found to have the cercariae.



The foot again with the swimmers itch rash



Huffmanella japonica i.e. bubble snail

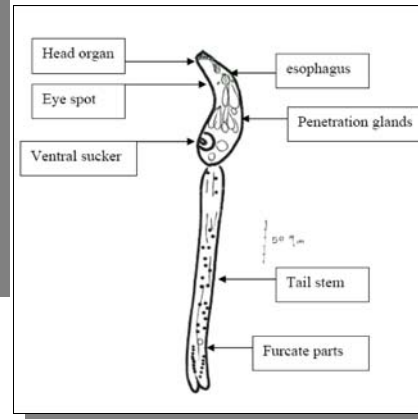


Diagram of Schistosome



The collected cercariae of a bird schistosome fresh sample; X 400

