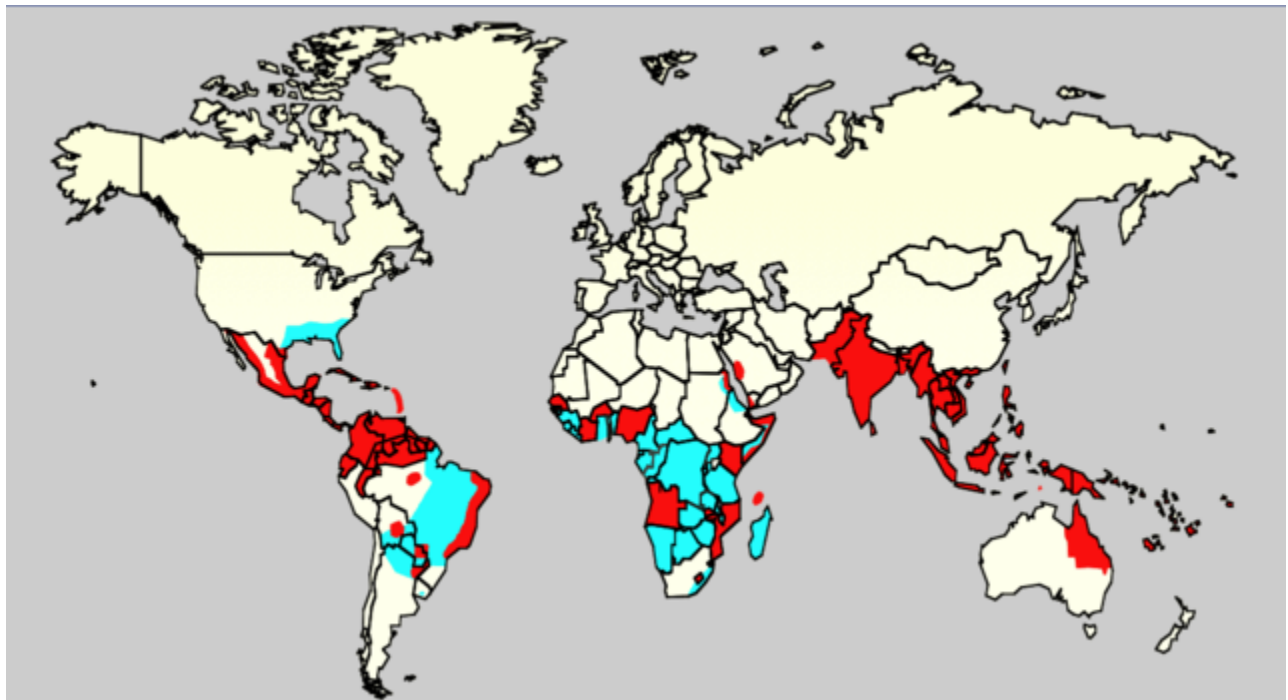


Source: Bangkok Post, 21 Dec, 2011

Thai herbal medicine: Natural mosquito repellent

By Jon Fernquest

Mosquitoes breed in stagnant floodwater & bring with them dengue fever & encephalitis. Thai herbal medicines help drive mosquitoes away.



Map above shows the areas of the world with a dengue fever problem (Source: Wikipedia). Photos below of the *Aedes aegypti* mosquito that transmits dengue fever feeding on a human arm and turmeric, one of the ingredients of Thai herbal mosquito repellent discussed in the article (Source: Wikipedia).



Mention holy basil (*kraprao*) and turmeric (*khamin*) in the same breath and many people will assume you're about to give the recipe for some appetising Thai dish. But the strong-smelling essential oils in these two kitchen-garden plants also make them perfect as ingredients in a natural mosquito repellent.

Mosquitoes are normally a major annoyance for flood-hit communities since stagnant water is an ideal breeding ground for the insect's larvae.

The good thing about using essence of (*kraprao* leaves or *turmeric* root to ward off this pest is that both plants are easy to find and relatively safe to use compared to commercial chemical repellents, said Supaporn Pitiporn, a pharmacist at Chao Phraya Abhaibhubejhr Hospital, noting that another advantage was that the method for extracting the essence was very simple.

Other commonly found plants with anti-mosquito properties are *hanuman prasan kai*, a decorative shrub in the Araliaceae family, and myrtle grass - called *waan nam* in Thai.

These four plants contain substances equivalent to Deet (Diethyl-meta-toluamide), a pesticide developed by the US army following its experience of jungle warfare during World War II and later *certified* by the World Health Organization for *civilian* use.

PREPARATION PROCESS



Rinse the plant of your choice to *remove* any earth and allow it to dry completely before cutting it into small pieces. Heat some coconut oil in a frying pan and fry the chopped plant material for five minutes. Then remove the pan from the heat and cover it with a lid to keep the extract from evaporating. When cool, scoop the contents of the pan into a *strainer* lined with a square of *muslin cloth* and allow the liquid to drip into a small bottle

The result is a home-made mosquito repellent which Supaporn recommends keeping at room temperature away from direct sunlight.

Laksana Lueprasert, a pharmacist at the Ministry of Health's Medical Sciences Department, said that an *application* of home-made repellent like this should be *effective* for about two hours *against mosquitoes*, which are active during daylight hours (and can transmit hemorrhagic dengue fever) and for seven hours against *nocturnal* mosquitoes, which carry encephalitis, a potentially fatal condition that causes acute inflammation of the brain.

However, Laksana urged people to take other preventive measures to reduce the risk of mosquito-borne diseases, including making sure there are no puddles or receptacles holding standing water *in the vicinity of one's home* which can serve as *breeding grounds* for the insect.

The Medical Sciences Department has also developed a new anti-mosquito formulation called "RepelMos". The fragrance-free lotion, which has already been distributed to several flood-evacuation centers, can keep away all types of mosquitoes for five to seven hours. It can also be used against leeches; a few drops of lotion on the offending creature makes it much easier to remove from one's skin.