LOOKING FOR BLOOD MEALS

K.G. Janaka Karunasena
National Science Foundation

Dracula is famous for blood sucking from the human being, and most of the people are afraid of him. Although it is an imaginative thing, there are actual 'Draculas' that can be seen in our day-to-day life. Mosquito is such an animal familiar to us and they are frequent visitors to our homes.

Mosquitoes are more important in our lives and our economy because there are more than 3000 species of them in the world and they spread various different lethal diseases such as Malaria, Filariasis, Dengue, Japanese Encephalitis, Yellow fever, and West Nile Viral disease, etc. Therefore, mosquitoes are considered as the most dangerous animals in the world and they cause death to two to three million (2,000,000 to 3,000,000) people per year in the world by way of transmitting the above-mentioned diseases.

Male mosquitoes are innocent and they feed only on nectar from plants. Female mosquitoes are the ones who are looking for blood meals. They bite animals and human being many times in their 100-day long life period. Male mosquitoes are short lived, generally about 10 to 20 days. Female mosquitoes need blood protein of human and animal blood to develop their eggs. A female mosquito that consumes more than her own body weight in blood, can deposit around 250 eggs at once in water.

You may not known that there are certain people more at risk of mosquito bites, and hence to the mosquito borne diseases. Pregnant women, young children, adults over age of fifty, people with a weaken immune systems are at greater risk of mosquito bites than other people.

Mosquitoes are known to be attracted to Carbon Dioxide and various smells (volatile substances) released from our skin. It was reported that pregnant women are at a greater risk being bitten by a mosquito because they are twice as attractive to mosquitoes as non-pregnant women. It was found that women in an advanced stages of pregnancy enable 21 % more than non-pregnant women, abdomen of pregnant women were 33 degrees hotter and release more volatile substances from their skin. This results to be more attractive by mosquitoes.

Although mosquitoes create problems to people from generations, it is not found yet a 100 % successful method to eliminate this menace. One of the best methods to eliminate them to a considerable amount is use of a device invented in USA called 'Mosquito Magnet'. This is really a breakthrough of technology and this instrument emits a stream of Carbon Dioxide that mosquitoes mistake for exhaled breath of their pray. When mosquitoes get attracted in to the Mosquito Magnet, they are vacuumed into a net where they dehydrate and die within 24 hours. A 20 lb propane tank powers the Mosquito Magnet and it will last about 18 – 20 days. This technique is environmentally friendly and safe since uses no pesticides.

Countries like Sri Lanka cannot afford the cost of eliminating mosquitoes by using

high technology. Therefore, it is always advisable to follow up methods for prevention of spreading the mosquito borne diseases. The most effective way to do this to get rid of them before they appear. Some important tips to follow are given bellow.

- Not allowing of standing water to accumulate for more than two days. Better to check: old tires, un-used buckets, and plastic containers, base of flowerpots, plastic covers or any container that may collect water.
- Changing of water in birdbaths, and fountains at least once a week
- Cleaning of debris from rain gutters and removing of standing water under or around structures.
- A thin layer of oil will kill mosquitoes already present in the standing water.
- Stock minnows or goldfish in ornamental pools. They eat mosquito larvae on the water surface.
- Fill or drain large puddles, ditches and swampy areas.
- Remove, drain or fill tree holes stumps with mortar.
- Keep hedges and bushes trimmed to reduce shade. Mosquitoes can hide in the shade of tall grass.

Source: Internet

VIDURAVA

GUIDELINES TO CONTRIBUTORS (PROVISIONAL)

TYPES of PAPERS CONSIDERED FOR PUBLICATION

Articles written on the themes related to science and technology are accepted. Papers published or communicated for publication anywhere also can be submitted for publication in VIDURAVA. In such cases it is the author's responsibility to obtain written permission to reproduce the material. Articles submitted may be reviewed and edited by the members of the Editorial Committee. Submission of manuscripts in both languages (in Sinhala and English) will be much appreciated. Authors are encouraged to prepare articles in Tamil too, if possible.

GUIDE TO PREPARATION OF MANUSCRIPTS

Script

Manuscripts of papers should be typewritten in double space on one side white sheet. Adequate margins (4 cm) should be left with sufficient spacing at the top and bottom of each page. The typescript should be free of corrections and should be complete and in final form. **It is preferable if the article could be sent together with the diskette on MS Word 98.**

Length and Style

Articles should be written to a given theme; related to science and science activity. Articles should be well focused, preferably organized, structured and *avoid the "text book" style*. They should be written clearly and concisely. No maximum length of contributions is prescribed, but articles should *not normally exceed 2000 words*. Short articles are encouraged.

Manuscript layout

- *Title of the articles* should be brief and the a*uthor's names* and affiliation should also be mentioned.
- *Tables and figures* should be on separate sheets and should be fully labeled and captioned.
- *Graph and other line drawings* should be drawn in Indian ink on tracing paper or white drawing paper preferably art paper not bigger than A4 size.
- *Photographs* must have good contrast.
- Use names of chemical compounds and not their formulae in the text. Zoological names as well as Botanical names should be properly spelled and typed in italics or underlined. Mathematical applications, such as statistical analysis should be avoided as far as possible.
- Reference and footnotes should be numbered consecutively and given at the bottom of each page. References should be as much as possible be only to referred text books use for advanced level classes and abbreviations should be avoided in the references. Provide complete name of the textbook.

SUBMISSION OF MANUSCRIPTS

Manuscripts should be addressed to:-

VIDURAVA Editorial Office
National Science Foundation(NSF)
47/5, Maitland Place, Colombo 7.
Tel: 696771-3, Fax: 694754

Original along with two copies must simultaneously be sent to the above address.

(Papers found unsuitable in terms of the overall requirements of the bulletin will be returned to the authors. Returned papers cannot be resubmitted).