



# Liheede

**LIBERIAN HISTORY EDUCATION AND DEVELOPMENT**



**Syrulwa Somah, PhD,  
Executive Director – LIHEDE**

**&**

**Associate Professor of Environmental Health  
North Carolina Agricultural and Technical State University**

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**Malaria and Environment Hazards  
Spread Unchecked in the New Liberia**

## Malaria and Environment Hazards Spread Unchecked in the New Liberia



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# Liberia Geography



- Rainfall 70' inches in the interior
- Tropical rain forest deforestation
- WHO says 25,000 cases per 100,000 people
- Liberia is the most malarial country in the world
- Annual mean temperature of 82 degrees Fahrenheit
- Tropical forests account for 47 per cent of Liberia's land
- Survey shows 12.3 mosquitoes per room in Monrovia suburb
- About 2,000 acres of swamp land surrounds the outlying area
- Wetland of some 15,000 to 20,000 acres – a nearly perfect breeding ground for mosquitoes, and malaria
- Climate-hot, humid, dry winters with hot days and cool to cold nights
- Monrovia is around 50,000 acres, and within it lies a mangrove swamp
- Liberia total land is 111,370 sq km (*land: 96,320 sq km and water: 15,050 sq km*)
- Mosquitoes breeding grounds lies within 1.2 miles of the city (*flying range of the anopheles mosquito*)
- Wet and cloudy summers with frequent heavy showers Rainfall 100' inches along the coastal strip

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### What Exactly is Malaria?



- Mosquito lives on human's blood
- Mosquitoes are the primary vectors
- Mosquitoes feed mainly between sunset and sunrise
- There are four species of *Plasmodium* protozoa:
  - *Plasmodium falciparum*
  - *Plasmodium vivax*
  - *Plasmodium ovale*
  - *Plasmodium malariae*
- Malaria is a common, serious and debilitating tropical disease
- Thirty minutes after malaria is introduced in the blood-it infects the hepatocyte by multiplying asexually
- The parasites (*sporozoites*) are found in the mosquito's salivary glands within 10-18 days

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# Life Cycle of Mosquito



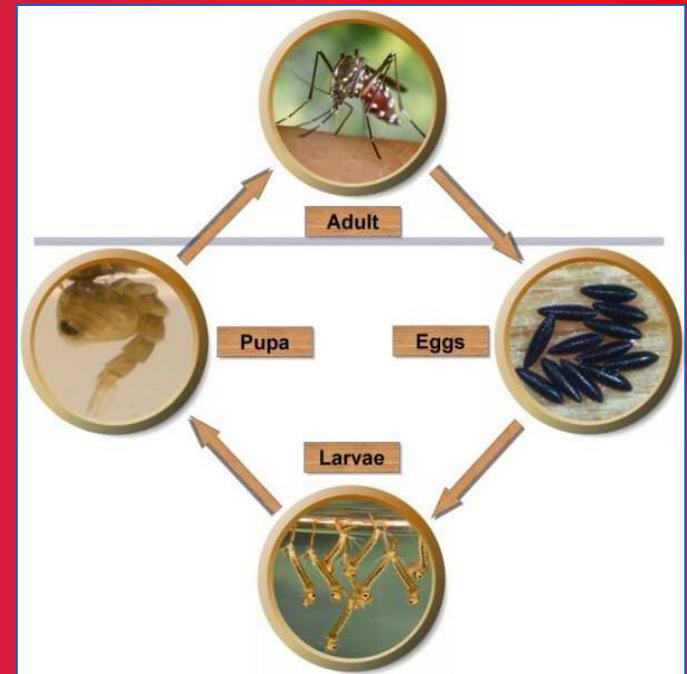
Adult females lay 50-200 eggs per oviposition

Mosquitoes can fly about 1 to 1.5 miles per hour.

Most mosquitoes remain within 1 mile of their breeding site.

A few species may range up to 20 miles or more.

## Mosquito Hatches Every 24 hours



Female mosquito lives 3 to 100 days; the male's is 10 to 20 days.

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# Malaria Paroxysm

### Cold Stage:

- vigorous shivering
- lasts 15-60 minutes
- feeling of intense cold

### Hot Stage:

- intense heat
- lasts 2-6 hours
- dry burning skin
- throbbing headache

### Sweating Stage:

- profuse sweating
- declining temperature



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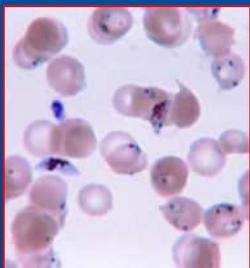
## Symptoms of Malaria

- Seizers
- Profuse sweating
- Fluid in the lungs
- Sequential chills, fever
- Headache, nausea, muscle pain
- Bloody stools, convulsion/ chain reaction
- Spleen gets bigger because of the malaria
- Tachycardia- heart rate greater than 100 beats per minute
- Unstoppable bleeding due to the malaria breaking down the red blood cells





## **Malaria in Pregnant Women Causes Anemia**



- **Can cause severe anemia**
- **Parasites attack and destroy red blood cells**
- **Malaria causes up to 15% of anemia in pregnancy**
- **All pregnant women in malaria-endemic areas are at risk**
- **In Africa, anemia due to malaria causes up to 10,000 maternal deaths per year**

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### Effects on the Unborn Child

- Parasites hide in the placenta
- Parasites interfere with transfer of oxygen and nutrients to the baby, increasing the risk of:
  - Stillbirth
  - Preterm birth
  - Spontaneous abortion
  - **Low birth weight** — single greatest risk factor for death during first month of life

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### Malaria Kills Liberian Children

- Coma
- Chills
- Cough
- Headache
- Low blood pressure
- Heart rate increases
- Dark urine or “peepee”
- Arthralgia or joint pints
- Jaundice or eyes look yellowish
- Delirium or “the person gone crazy”
- Anemia or diminished red blood cell
- Liver gets bigger because of the malaria



Damaged Liver

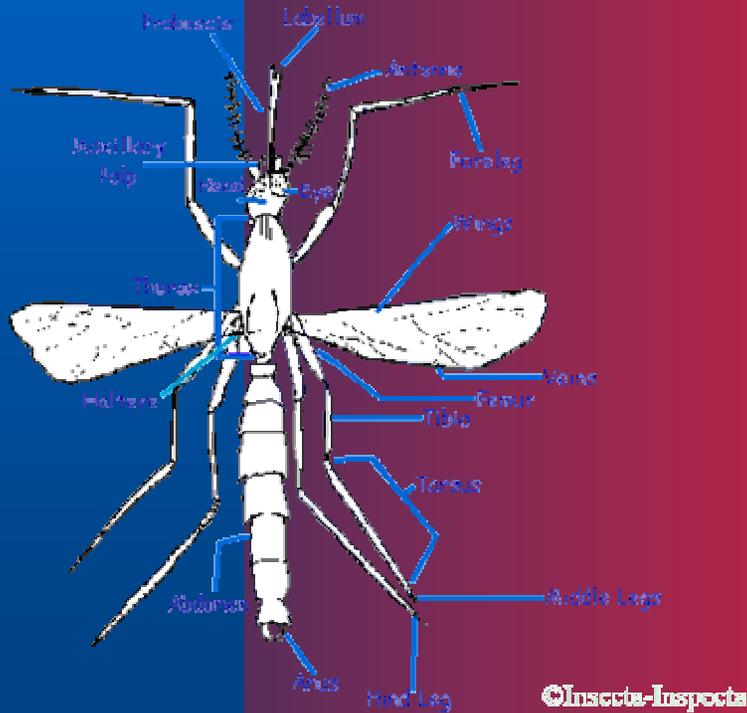
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## Faces of Malaria Victims



### Malaria: 50 Million Dead Since 1972



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## The At Risk



- The poor (*have-nots*)
- Pregnant women (*bearers of the future and leaders*)
- By far young adults appear to be at greater risk
- Children and elderly persons are more vulnerable to infectious
- Infection symptoms begins 7-14 days after being bitten by a female Anopheles mosquito
- Children and elderly immune systems are not as strong as other age groups

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## The At Risk



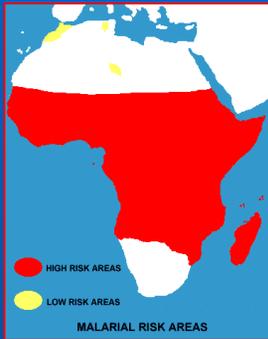
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## Malaria = Poverty



*A child with malaria. Malaria kills an African child every 30 seconds.*



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## **National Burden of Malaria**

### **Liberian Lives**

- **Malaria costs Africa 92 billions annually**
- **3.2 billion people are still at malaria risk**
- **90% of the death are in Sub-Saharan Africa**
- **Up to 2.7 to 3 million die from curable malaria**
- **An African child dies every second from malaria**
- **Mosquitoes are the most dangerous animals in the world**
- **Malaria kills more people than any known infectious disease**
- **Every 12 hours approximately 5000 people die from malaria**
- **Malaria kills three times more children in Africa than HIV and AIDS**
- **Every Liberian/African knows someone who has suffered from malaria**
- **More than 21,300 Liberian children die yearly from malaria and malaria-related diseases**
- **Half of all human deaths up to the 1900s could be traced to mosquitoes**
- **African women are 175 times likely to have miscarriages than European women**

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### **Economic Burden of Malaria-Liberia**

- **Malaria**

- Private sector
- inflow of foreign currency
- Households and communities
- 0.1 per hundred thousand people
- Government and the macro economy
- 63 cents on every dollar is spent on malaria
- Liberia as only 58 doctors for 3 million citizens
- Poverty and inequalities have been exacerbated
- Impacts on our national economy at a number of levels
- Government resources come under increasing pressure
- The Liberian government spends \$5 US dollar for health on each citizens
- Private sector continue to face reduced investment, growth, profits and inflow of foreign currency

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### **Economic Burden of Malaria-Liberia**

- **People are weak to go to work**
- **Students too weak to go to school**
- **Relatives are too weak to care for families**
- **Malaria shrinks the developing babies brains**
- **Malaria is a huge financial burden in Liberia**
- **Liberia spends \$40 million annually on malaria**
- **Poor citizens are too weak to survive other diseases**
- **Malaria is the number one cause of poverty in Liberia**
- **Bread and butter winners are too weak to cultivate fields**
- **Malaria contributes to absenteeism from agricultural work and exacerbates food shortage**

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### **LIHEDE Malaria Campaign/Status**

- **Began letters writing in 2003**
- **Liberia is PMI nation (more help needed)**
- **Current Programs: Culture-Driven Malaria**
- **Conducted International Conferences, Forums, and Seminars**
- **President Bush, Secretary Rice, US Senators, Liberian President & VP**
- **Pope John Paul II, WHO, World Bank, UN, AU, USAID, Denominations' heads, etc**
- **Partnership with NC A&T, Firestone, LIHEDE Members, DOT, USAID, MOH, MYS, MOA, MOIA, Malaria Foundation International, LEW, CORE, IMMC, etc**

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## LIHEDE Culture-Driven Photos/ Meeting



## **Malaria and Environment Hazards Spread Unchecked in the New Liberia**



## **Other Projects**

### **How Can You Help Liberia**

- **Malaria Library**
- **Support LIHEDE Nation-wide FORUM**
- **Fundraising rally in organizations/churches for LIHEDE**
- **Voluntary or Internship to go with LIHEDE to Liberia to help**
- **Donate any amount you have to carry on LIHEDE's programs**
- **Radio Station to reach vast population in vernacular languages**
- **National malaria curriculum development to teach the disease in schools**
- **Join the campaign and write letters to likely donors and individuals**
- **Doctor- in- the Box Project to Train 500 midwives and Nursing Aids**
- **Contact celebrities that you know to be a spoke person for malaria control in Liberia**
- **Males and females malaria soccer teams needs gears (boots, stocks, balls, jersey, etc) for male and females**

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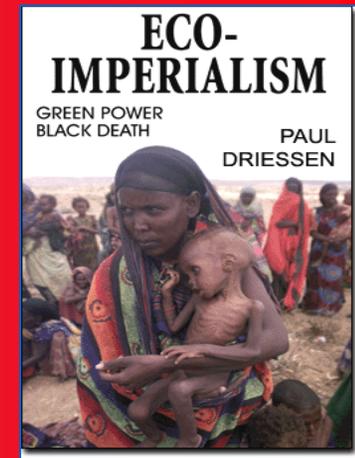


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## Global Burden of Malaria

### Summary

- You can do some about it today
- Malaria is a huge drains in Liberia
- The only good mosquito is a dead one
- Malaria is unknown in the developed world
- LIHEDE goal is to end endemic malaria in Liberia
- Help Liberia children financially or in-kind-donations
- Malaria kills poor people so it does not get attention like HIV that kills rich people
- LIHEDE goal is to use the same technical approach in USA, Israel, Germany, Japan, Italy, Romania, etc. to defeat malaria





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## **How to Contact LIHEDE, Inc.**

**Call:** (336) 456-8075

**Visit:** *www.lihede.org*

**Email:** *lihede2003@yahoo.com*



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THANKS!



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