



Ronald Ross "The Nobel Laureates who unraveled the mystery of malaria transmission".

- Prof. Mangal Tukaram Shinge

As we all celebrating A "Mosquito Day" on August 20, 1897 named by Ronald Ross. Malaria was the most important health hazard encountered by U.S. troops in the South Pacific during World War II, where about 500,000 men were infected.

According to Joseph Patrick Byrne, "Sixty thousand American

Soldiers died of malaria during the African and South Pacific campaigns. "Fourteen laureates were awarded a Nobel Prize in 2022, for achievements that have conferred the greatest benefit to humankind.

Ronald Ross was born on May 13, 1857, as the son of Sir C.C.G. Ross, a General in the English army. He commenced the study of medicine at St. Bartholomew's Hospital in London in 1875; entered the Indian Medical Service in 1881. Alphonse Laveran made the discovery of the malarial parasite in 1880. The next most important milestone in the history of malaria was the unraveling of the mystery of malaria transmission.. In 1894 he investigates the experimental hypothesis of Laveran and Manson that mosquitoes are responsible for the propagation of the disease. And finally After two and a half years' failure, Ross had succeed in demonstrating the life-cycle of the parasites of malaria in mosquitoes, Ronald Ross discovered that the plasmodium parasite--'Laveran's germ'--was transmitted by anopheles mosquitoes to human beings to cause malaria, thus

establishing the hypothesis of Laveran and Manson., Second person who was received Nobel Prize for Medicine or Physiology in 1902 i.e. Ronald Ross. For his discovery of transmission of malaria by Anopheles mosquito in 1897. In celebration of the centennial year of that epic discovery, we reminisce on that event, focusing on the discoverer. In 1899 he joined the Liverpool School of Tropical Medicine under the direction of Sir Alfred Jones. He was immediately sent to West Africa to continue his investigations, and there he found the species of mosquitoes which convey the deadly African fever. Since then the School has been unremitting lches have been confirmed and assisted by many distinguished authorities, especially by Koch, Daniels, Bignami, Celli, Christophers, Stephens, Annett, Austen, Ruge, Ziemann, and many others.

He was an indifferent student; he liked to write novels and poems and only just managed to gain a medical qualification. Fortuitously he was mediocre enough to enter the least prestigious section of the Indian Medical Service, which put him directly in contact with the parasites that were to become his passion. Despite honor's being showered on him, life after the Prize also was not straightforward, he was irascible and his innovative mathematical and economic approaches to disease control were overlooked. Ross continued his research in India, using a more convenient experimental model, malaria in birds. And demonstrated that mosquitoes could serve as intermediate hosts for bird malaria. He showed that the route of infection was through the bite of a mosquito with experiments on four sparrows and a weaver bird. The account of these findings was presented to the British Medical Association. He had demonstrated that mosquitoes could serve as intermediate hosts for bird malaria. After feeding mosquitoes on infected birds, he found that the malaria parasites could develop in the mosquitoes and migrate to the insects' salivary glands, allowing the mosquitoes to infect other birds during subsequent blood meals.

Ross wrote extensively on malaria including his book





The Prevention of Malaria in 1911 and on other topics including mathematics. He also wrote a number of novels including *The Child of the Ocean*, *Spirit of the Storm*, and *The Revels of Orsera*.

References -

- Celli A: A History of Malaria in the Italian Campagna from Ancient Times. London. 1933
- Harrison G: Mosquitoes and Malaria: A History of the Hostilities since 1880. 1978, London: John Murray
- Poser CM, Bruyn GW; an Illustrated History of Malaria. 1999, New York: Parthenon.

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