PHOTO: ASA RESEARCH STATION

PHOTO: MALIN BARRLUND

*SITES includes five of SLU's field research stations: Asa, Röbäcksdalen, Svartberget, Grimsö and Lönnstorp (pictures from top left).*

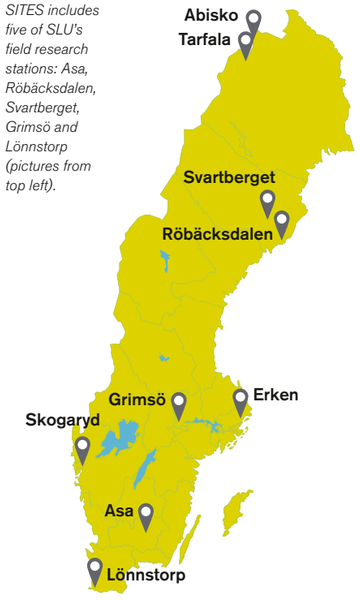


PHOTO: THOMAS HÖRNLUND

PHOTO: HENRIK ANDRÉN

PHOTO: PEKKA KURPA

# Field-based research from north to south

**SLU and Sweden have a coordinated infrastructure of field research stations called SITES (Swedish Infrastructure for Ecosystem Science). All researchers are welcome to use this infrastructure in their research.**

SITES covers nine research stations and other field-based infrastructure for ecological and environmental research concerning terrestrial and limnic environments. The stations are located across the country and cover many different habitats and climatic zones – from agricultural landscapes, forests and mountain regions to wetlands and various types of inland waters.

All researchers, whether Swedish or international, can apply to use the stations, e.g. in order to conduct experiments in different climatic zones. As an external researcher, you can stay at the station and take measurements and conduct experiments or commission the station to carry out assignments. This approach enables you to get specialist help to carry out your experiment. The stations can also offer access to various long-time series of data that can be of great value for research.

SLU is host and coordinator of SITES, which also includes stations belonging to the University ofv Gothenburg, the Swedish Polar Research Institute, Stockholm University and Uppsala University. SITES is jointly financed by the Swedish Research Council and the five host organisations.

www.fieldsites.se





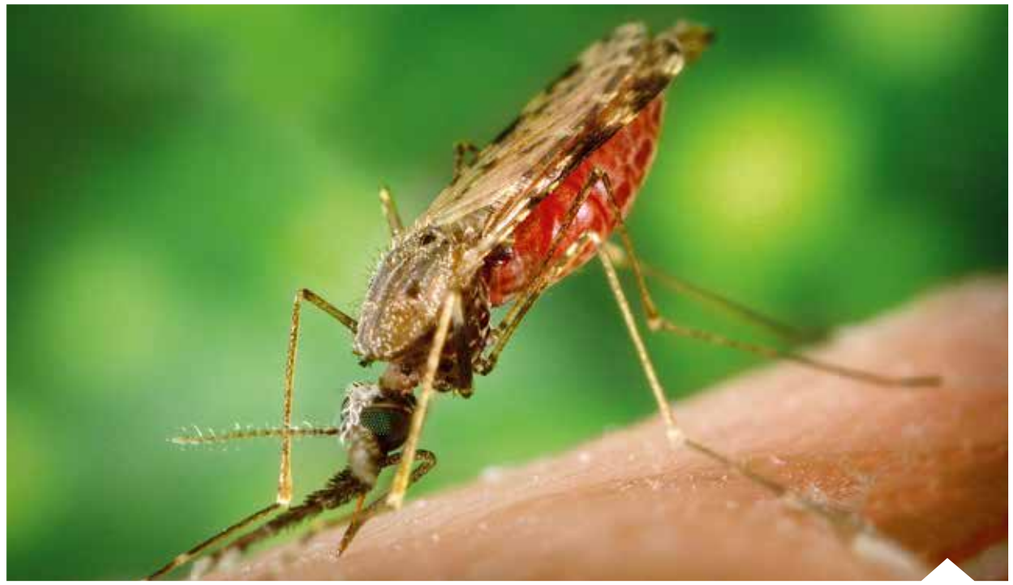

PHOTO: JAMES GATHANY, CENTERS FOR DISEASE CONTROL AND PREVENTION

*Malaria mosquito that is getting a blood meal. Bacteria in the mosquito's gut could be modified to fight the malaria parasite.*

# Fighting malaria in the mosquito's gut

**Mosquito nets and preventive** healthcare have been important tools in protecting against the malaria parasite for many years, but the disease is still affecting several hundred million people every year.

A group of researchers at SLU are now attempting to use genetic technology to fight the parasite in the gut of the mosquito.

It is not the malaria mosquitoes which will be genetically modified, but bacteria that live in the mosquito's gut and grow rapidly when the mosquito gets a blood meal. The idea is to modify these bacteria so that they produce substances that stop the malaria parasite from developing further.

The researchers are focussing on a new family of bacteria, Thorselliaceae, named after the Swedish mosquito researcher Walborg Thorsell. These bacteria are common amongst mosquitoes not only in Africa, but also in other parts of the world where malaria is a problem.

In this pilot project, efforts are being made to determine exactly which properties of these bacteria make them common in malaria mosquitoes. Research is also under way in collaboration with Brazilian colleagues concerning the occurrence and genetic variation of *Thorsellia* bacteria in important mosquito-hatching areas.

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PHOTO: ISTOCKPHOTO

*Research findings from SLU can help improving the therapy for mast cell-related diseases such as hay-fever.*

# New findings improve hay-fever therapy

Mast cells are a type of white blood cell and are best known for their harmful effects in connection with allergic reactions, but they may also be involved in many other diseases, such as cancer, bacterial infections and arteriosclerosis.

Intensive research is currently under way to determine exactly how mast cells influence these diseases. Recent studies indicate that various substances, stored inside the secretory granules of mast cells, are the active components.

SLU's world-leading mast cell researchers have shown how the storage of active components in the granules of mast cells takes place. The same researchers lie behind the discovery of new active components which are stored in granules. They have also shown how enzymes in granules can break down proinflammatory substances, which are produced by other types of white blood cells.

This understanding could help improve the therapy for various mast cell-related diseases. The SLU researchers have recently written a review of mast cell secretory granules in Nature Reviews Immunology.

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