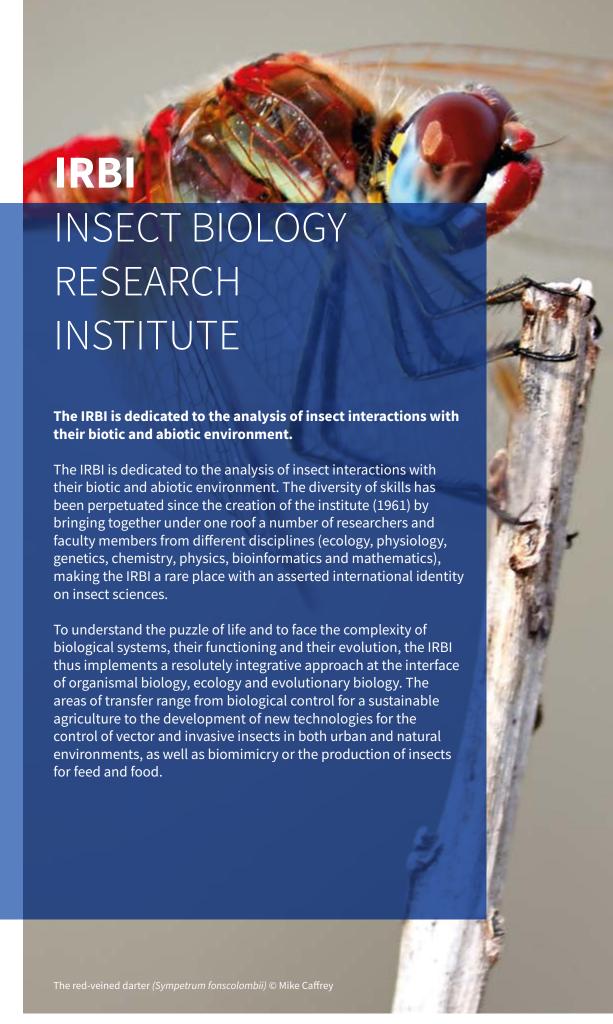


UMR7261

**ECOLOGY AND ENVIRONMENT** 







#### RESEARCH TOPICS

### IMIP TEAM - BIODIVERSITY AND FUNCTIONING OF MICROORGANISM / INSECT / PLANT INTERACTIONS

- Understand insect parasitic strategies and the role of their associated symbiotic viruses and bacteria
- Characterize biodiversity and interaction networks around insects through environmental genomic approaches

### ESORE TEAM - SOCIAL EVOLUTION AND RESPONSES TO THE ENVIRONMENT

- Explain the evolution of social behaviors and the transitions from a solitary life to integrated societies
- Determine insect response to environmental stresses and the consequences on insect diversity and associated ecosystem services

# INOV TEAM - ORGANISMS-ENVIRONMENT INTERACTIONS AND RESPONSES TO GLOBAL CHANGES

- Understand the physical, physiological, and ecological mechanisms of environmental interactions at the individual scale
- Integrate these mechanisms to better predict insect response to global changes

# CROSSCUTTING THEME - FOOD AND HEALTH STRATEGIES FOR TOMORROW

- Explore the potential of insects as food and feed as well as their potential for entomoconversion of organic matter through 4 axes:
  - reproduction strategies
  - prevention of health risks
  - optimization of rearing systems
  - metabolism, standards and traceability

#### **EXPERIMENTS**

The IRBI has several experimental platforms including

- a chemical ecology platform
- an evolutionary ecology and functional genomic platform
- a physical ecology and optical metrology platform
- a behavioral ecology and sensory ecology platform
- a functional ecology and thermal biology platform The institute is also equipped with an insectarium, numerous rearing and highly controlled environment facilities

### **TRAINING**

The IRBI promotes and encourages students who are pursuing a scientific career through master's and PhDs programs covering the multiple facets of evolutionary and integrative biology with insects as a preferred model.

It develops and participates in:

- a master's degree in Behavioral Ecology, Evolution and Biodiversity
- a Master's degree in Biology-Agrosciences for professional purposes in animal production and food processing
- a European doctoral training in Insect Sciences

### **COLLABORATIONS**

The IRBI leads and participates in many research programs with (inter-)national academic partners.

The IRBI also addresses societal issues through a series of research programs with industries, local authorities, foundations and associations. Resolutely oriented towards international collaborations, the Institute is also developing links with local actors for the conservation of the exceptional natural heritage of the Loire Valley. The IRBI is a founding member of the EntomoCentre network bringing together research forces and regional non-academic structures on entomology.

#### **KEY FIGURES**

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CNRS researchers

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faculty members

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support staffs

Faculté des Sciences et Techniques

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