

Mission Statement

The primary objective of research at EBCL is to develop biological control technologies which can be used to suppress invading weeds and insect pests of Eurasian origin. This is done by searching for natural enemies (insects, mites, and pathogens) in their native habitat, determining their identity, testing their host specificity and potential impact in laboratory and field experiments, and shipping promising organisms to the USA for further testing as biological control agents.

Biological control is an important component of Integrated Pest Management (IPM), which aims to develop safe, environmentally-sound pest management technologies that are practical, effective and economical, and which conserve non-renewable resources.

EBCL collaborates with scientists in many countries in Europe, Asia and Africa to explore in regions of origin of the target weeds and pests.

EBCL Affiliation with Scientific Institutions

AGROPOLIS (a consortium of agricultural research institutions - France)

CABI (Center for Agriculture and Bioscience International – Switzerland, UK)

CGBP (Research Center for the Management and Biology of Populations - France)

CILBA (International Complex for Biological Control in Agropolis - France)

CIRAD (Agricultural Research Centre for International Development - France)

CSIRO (Commonwealth Scientific and Industrial Research Organization - Australia)

ENSAM (National Agricultural University in Montpellier)

INRA (National Institute for Agricultural Research – France)

IRD (Institute for Research and Development – France)

History of EBCL

The European Biological Control Laboratory (EBCL) of the United States Department of Agriculture, Agricultural Research Service (USDA-ARS) was established during 1991 near Montpellier, France. This new laboratory was created from the merger of the former European Parasite Laboratory, established in Paris in 1919, and the Biological Control of Weeds Laboratory, established in Rome in 1958. EBCL has a satellite laboratory in Thessaloniki, Greece to facilitate exploration and field studies, including studies of disease vectors (mosquitoes, sandflies and ticks).



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European Biological Control Laboratory

Montferrier-sur-Lez France



United States Department of Agriculture

Agricultural Research Service



Special Research Facilities

Molecular Genetics Laboratory

This laboratory provides state-of-the-art molecular genetics analysis for identifying species, discriminating cryptic populations, and determining their origins, which is critical for all biological control programs.

Microbiology Laboratory

Microbiology research is conducted to understand interspecific interactions between micro-organisms, target pests, and natural enemies.

Chemical Ecology Laboratory

The combination of behavioral experiments and chemical analyses will help us better understand the host specificity of prospective biological control agents.

Quarantine Laboratories

Two quarantines enable us to work with exotic organisms:

- P-2 laboratory and greenhouse is certified for insects
- P-3 laboratory is certified for plant pathogens

Both quarantines are authorized and regularly inspected by French authorities.

We follow CBD (*Convention on Biological Diversity*), ABS (*Access and Benefit Sharing*, Nagoya Protocol) and CITES (*Convention on International Trade in Endangered Species*) regulations, including obtaining the appropriate permits to collect, export, and import organisms from the countries involved.



Biological Control of Insects

Asian Longhorned Beetle

Anoplophora glabripennis

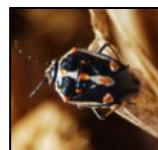
Exploration for egg parasitoids in East Asia



Bagrada Bug

Bagrada hilaris

Exploration for egg parasitoids in S. Africa & Near East



Brown Marmorated Stink Bug

Halyomorpha halys

Exploration for egg parasitoids in East Asia



Cattle Fever Tick

Rhipicephalus annulatus

Exploration for agents in Balkans



Olive Fruit Fly

Bactrocera oleae

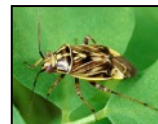
Mass rearing & shipment of parasitoids; Ecology of pathogens



Tarnished plant bugs

Lygus spp.

Collection of egg parasitoids in Europe



Integrated Management of Vectors

Mosquitoes: (*Aedes*, *Anopheles*, *Culex* spp.)

West Nile Virus, Chikungunya and Dengue

Sand flies: (*Phlebotomus* spp.)

Leishmaniasis

Taxonomy, biology, evaluation of traps and insecticides

Biological Control of Weeds

African wire grass

Ventenata dubia

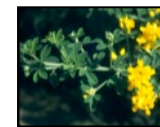
Exploration for agents in Europe



French broom

Genista monspessulana

Testing host specificity of agents



Giant reed

Arundo donax

Collection and shipment of agents



Medusahead

Taeniatherum caput-medusae

Exploration for agents in Eurasia



Russian thistle

Salsola tragus

Exploration for agents in Eurasia; testing host specificity



Sahara mustard

Brassica tournefortii

Exploration for agents in Europe, N. Africa, Asia



White top / hoary cress

Lepidium draba

Studying insect-plant-microbial interactions



Yellow starthistle

Centaurea solstitialis

Exploration for agents in Europe, testing host specificity

