



TSW Analytical
DELIVERING SOLUTIONS

Biological and Entomological Services Unit



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Biological and Entomological Services Unit

The **Biological and Entomological Services Unit** provides collection and identification services for organism infestations, analyses of the causes/time of insect contamination and possible solutions to avoid further infestations, biomonitoring, expert witness report/courtroom testimony, medical entomology consultancies and a range of training solutions.

Services

- **FOOD** – Stored product entomology and food forensic services include identification, analysis, evaluation of artifacts and prevention of insects contamination in foodstuff and other products.
- **MANAGEMENT** – Urban entomology services including identification, analysis and management of insects in human living environments. For example, management of insect penetration in retail shops or food preparation, storage and consumption areas.
- **FORENSIC** – Medical/Forensic entomology service includes identification and analysis of insects and other micro/macroorganisms related to cases of
 - suspicious death, neglect in aged care and children, and animal cruelty;
 - presence of toxic substances (entomotoxicology);
 - presence of foreign DNA in insects;
 - infestation of living human and animals (myiasis) and parasitosis.
- **MEDICAL** – Use of insects to treat necrotic and gangrenous wounds (“maggot therapy”).
- **COMPLIANCE** – Entomology and biology based services to assess if land use and handling practices for various industries is compliant with respective regulation.
- **BIOMONITORING** – Ecological evaluation of human impact using organisms.
- **PEST CONTROL** – Entomology and biological service to assist in the control of pest species (e.g. stable flies in horticulture).
- **FORENSIC (AQUATIC)** – Recovery and analyses of evidence found in water environment and various aquatic forensic based services. For example, analysis of samples for diatoms in aquatic based forensic investigations.





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Research and Development

The **Biological and Entomological Services Unit** has an active Research and Development program and can offer a range of complimentary services for external researchers. Some key areas of our research capability include:



- Development of new methods for insect identification (morphological analyses of adults and immatures, molecular analyses of doubtful/ruined/ancient evidence);
- Development of new insect organisms rearing capabilities;
- Development of testing methodologies especially applied to toxicology;
- Development of new pest-management solutions;
- Development of new biosecurity solutions;
- Interpretation of data based on the insect ecology, physiology and distribution;
- Evaluation of the effects of the environment on the insect biology and life cycle;
- Planning, leading, managing, advising, developing projects, laboratory test work and field trials;
- Development and/or improving forensic entomology tools and kits.

Training Services

The **Biological and Entomological Services Unit**, through its highly skilled staff with extensive experience in teaching courses and workshop in at Universities and Police and Law Enforcement Agencies globally have developed unique courses that combine formal theoretical and practical education, both in the classroom, laboratory and field.

These courses are oriented to science/forensic science students, forensic practitioners such as law enforcement officers and pathologists, but also to lawyers and those who are seeking updates regarding the application of entomology and other biological services in the different forensic contexts.



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To access any of the services offered by the
Biological and Entomological Services Unit, contact:

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