Our vision and aims

Our group focuses on the diversity of invertebrate assemblages in two contexts:

i) freshwater invertebrates in running waters and their associated floodplains

ii) terrestrial invertebrates in various settings including suburban agricultural landscapes.

The invertebrates we are mostly concerned with include insects, molluscs and crustaceans.

Major research topics

- The medium-term (i.e. 10 - 20 years) monitoring of large-scale river and floodplain restoration. How does the diversity of invertebrate assemblages react to hydrological restoration measures? Are there confounding reasons for change in biodiversity following restoration (e.g. the spread of alien species, climate change, contaminants)? How do priority species behave in this context? Can we develop tools to inform future fluvial restorations?

- The use of one family of flies (Diptera, Syrphidae, or Hoverflies) to assess the role of productive, as well as non-productive, habitats of agricultural landscapes i) in sustaining a diverse fraction of the regional species pool, ii) in providing services beneficial to crop production (pollination, predation on other phytophagous insects).

Our approach and tools

Our work on invertebrates incorporates a dual perspective:

- The roles of invertebrates in ecosystem functions and services. Invertebrates are able to process a fraction of organic matter that is not accessible for other animals. They are essential prey for many birds, fish and mammal species. They play key roles in plant pollination and as auxiliaries for many crops.

- The use of invertebrates as tools in ecosystem monitoring, assessment and conservation. Given their diversity and association with all types of freshwater and terrestrial habitats, invertebrates can be used to assess habitat "quality" and to monitor habitat change.