

The Freshwater Detective Series

An introductory course on life in small streams / rivers/ ponds and loughs: their importance, conservation and management.

Course description:
Based on the content of the very successful Freshwater Detective series of lectures and field trips run over many years in University College Dublin, the more recent Small Streams Characterisation Programme (SSCS) and the larger county-wide courses, this introductory course will give participants an understanding of Ireland's freshwater ecosystems. It provides a basic knowledge of life streams/ rivers / ponds / loughs and how these waterways function to provide juvenile fish to our main water bodies such as loughs and larger rivers. The participants will discover how to identify the more common plants and animals, which may act as indicators of the health of the stream. The course will also introduce participants to the threats faced by these tiny delicate watercourses, not alone from the more common impacts of land drainage and pollution but also the impacts which invasive fish, invertebrate and plant species can have on the functioning of these water courses.

This one-day introductory course will consist of a series of interactive introductory talks in the morning and full field sessions in the afternoon. The afternoon programme will include training on how to carry out a river / pond survey, the collection and identification of key indicator invertebrate and plant species, ensuring connectivity within catchments and the importance of removing barriers to fish migration.

List of key topics to be covered:

Morning Classes:

- Where our fresh water comes from?
- The formation of Ireland's rivers and loughs / ponds /lakes
- The water cycle
- The arrival of native plants and the animals into Ireland
- "Reading" streams and river channels - how to become a Freshwater Detective

- Caring for our small streams and rivers
- Pollution / water quality – sources and remedial action
- Drainage - impacts and mitigation / retention of spawning gravels
- Barriers – the importance of connectivity
- Climate Change – what lies ahead of us and planning for change
- Apportioning water resources and water resource management
- Mobilising the citizen scientist to guard and protect our small streams and rivers

Afternoon Field Course

- Basic stream related Health & Safety / hazards and risk assessment
- Biosecurity
- The Stream Corridor – how it works
- Basics of survey methodologies for in-stream and riparian corridor fisheries habitat quality
- An introduction to assessment techniques - fauna, flora and channel access for spawning fish.
- Provide basic knowledge on the timing of stream / river / lough surveys
- Provide basic knowledge of the sampling equipment required and how to use same
- Training in the LAWPRO CSSI system of assessing water quality

How will the course be taught? (Teaching Methodologies):

The tutor (KW) has a very interactive and accessible style. The overall approach is conversational and relaxed. No previous knowledge of freshwater biology or ecology is required.

The course will comprise two morning sessions (in-doors): 09.30 to 11.00 and 11.15 to 13.00 and an afternoon field course, 14.00 to 17.00.

Details of the Course provider:

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Tutor Bio

Professor Ken Whelan

Ken Whelan works as an environmental and fisheries consultant - http://www.kenwhelan.info/. He is also an Adjunct Professor in UCD's School of Biology and Environmental Science. Ken is best known internationally for his work on the Atlantic salmon. He has also produced, presented and scripted many films and videos on various aspects of Irish fisheries, wildlife and angling. He is a regular radio contributor to the Mooney Goes Wild programme. Ken is a very experienced teacher, particularly in the adult education area. He has wide experience of science communications and the delivery of a range of water craft courses. With his colleague Jason O'Riordan (https://gamefishingireland.ie/), he also runs very popular freshwater and marine angling courses.