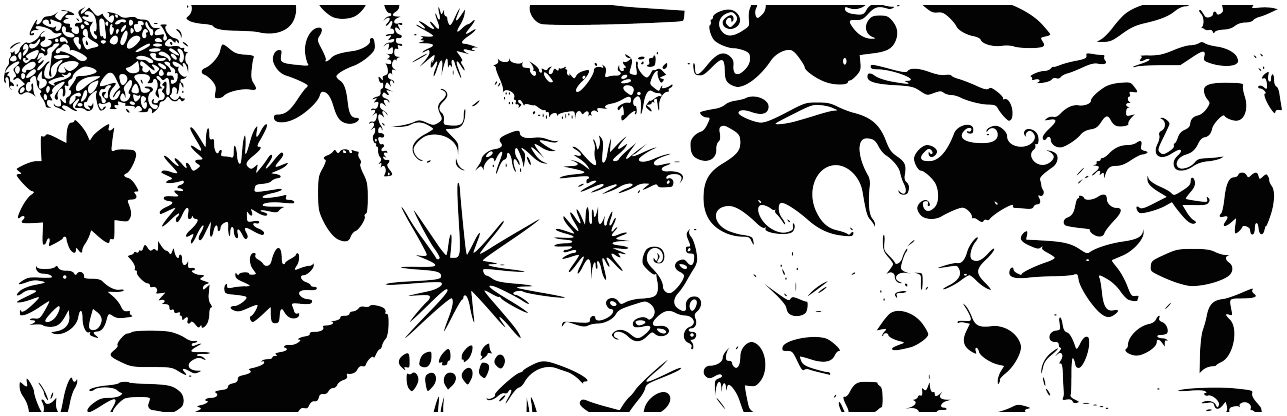
DNA Barcoding

and Barcode of Life Data-system

Speaker:

Dr. Filipe Costa



September 25th and 26th, 2018
9:00 to 13:00

Computer room (Block C)
Experimental Sciences Building
Campus Universitario de Vigo

Organizer:
Dr. Carlos Canchaya
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Facultade de Bioloxía
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Structure

Introduction to DNA barcoding and Barcode of Life Data-system (BOLD) postgraduate course with theoretical and practices lectures both days.

Sep. 25th: Barcoding, theoretical concepts and case-studies.
Sep. 26th: Introduction to BOLD and *in silico* practical work.

Barcoding programme.

1. **Introduction to single-specimen DNA barcoding (Barcoding 1.0).**
   Motivation, concept, relevance and rationale. The DNA barcoding workflow and development of reference libraries.

2. **DNA barcoding and biodiversity discovering and monitoring.**
   Proof-of-concept studies, examples with crustacean and other marine taxa. The relevance of the barcode-gap. Cryptic species and detection of hidden diversity: case-studies.

3. **Applications and DNA barcoding.**
   Illustration of a panoply of applications and utility of DNA barcoding with examples of studies involving mostly marine organisms.

4. **e(DNA) metabarcoding (Barcoding 2.0).**
   Brief overview of e(DNA) metabarcoding: historical context, emergence of high-throughput sequencing (HTS) impact and potential for DNA barcoding. The metabarcoding workflow and challenges. Examples of applications and prospects.

BOLD programme.

1. **Introduction to BOLD.**
   Overview of BOLD structure and features. Navigating and viewing data in BOLD.

2. **Barcode Index Number (BIN).**
   Introducing BINs and the BINs database.

3. **Analysing data in BOLD.**
   Using BOLD tools. Identification engine. Distance summary. Taxon ID tree. Barcode gap analysis. BIN discordance report.

4. **Hands-on in silicon practical work for conducting analyses within BOLD environment.**