



Project no. 018340

Project acronym: EDIT

Project title: Toward the European Distributed Institute of Taxonomy

Instrument: Network of Excellence

Thematic Priority: Sub-Priority 1.1.6.3: “Global Change and Ecosystems”

D13 First report on Integrated Training for taxonomy

Due date of component: Month 41

Actual submission date: Month 41

Start date of project: 01/03/2006

Duration: 5 years

Organisation name of lead contractor for this component: 13-RBINS

[Final]

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
Dissemination Level		
PU	Public	x
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Background

EDIT and other partner institutions are establishing a European state-of-the art School of Taxonomy: the **Distributed European School of Taxonomy** (DEST). The aim of DEST is to develop a joint taxonomic training programme provided by leading expert taxonomists in the participating institutions. The programme is intended to be offered to European and non-European trainees.

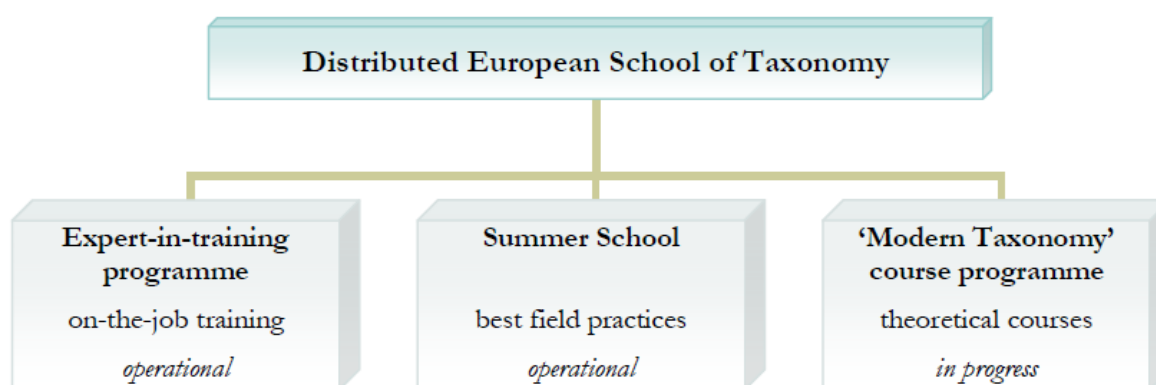
During the first phase of the set up of DEST, the existing taxonomic training resources in Europe were surveyed. A gap analysis revealed the strengths and weaknesses of those resources and highlighted the challenges that they have to face to meet the taxonomic standards and needs in the 21st century. This exercise provided a baseline to define the objectives and ambitions of DEST. A summary of this report can be found at <http://www.e-taxonomy.eu/files/C8.1.2.pdf> and a listing of existing training resources for taxonomy in Europe at: <http://www.e-taxonomy.eu/trainingresources/> A fully operational on-line catalogue of training resources with continuity for the future is under development.

Furthermore, by means of a call for training providers, teachers willing to participate in the DEST were mobilised.

Set up of the Distributed European School of Taxonomy

A draft proposal on the infrastructure outline of the DEST has been widely distributed to EDIT and non-EDIT partners for comments and has been discussed during the first DEST meeting (December, 2008) with interested partners. Discussions and exchanges of views on the school's curriculum, course programme, means of integrating training courses, conditions for participation, recognition of diplomas, granting possibilities and online study resources led to the following conclusions.

DEST comprises the following components:



Expert-in-training programme (operational) <http://www.e-taxonomy.eu/node/60>

The main objective of the expert-in-training programme is to provide young graduate students and early career researchers with an opportunity to acquire, and to strengthen, taxonomic research skills through on-the-job training. To this end, the trainee joins a project team where they are coached by an expert and shown 'how to do the job' in a particular, specialised taxonomic discipline. Other objectives of the programme are to encourage mobility, to promote integration by establishing new contacts with other researchers, and to contribute to capacity building in the trainee's institution. EDIT provides a limited number of individual 'Expert-in training' grants. These grants cover travel, subsistence and bench fees.

The expert-in-training programme was launched in June 2008. In the first call, 21 taxonomic training modules were offered by EDIT institutions for trainees from other EDIT institutions. To improve the impact and visibility of European taxonomic training resources, institutions outside EDIT were involved in the second call (2009). Thus the number of training module offers increased to 31, while grants were offered to trainees from EDIT partner institutions or from other European universities/research institutes. Hence, the number of grant applications increased from 10 in the first call to 61 in the second call. At the time of writing this report, the applications are being evaluated by the Selection Committee.

Summer Schools (operational) <http://www.atbi.eu/summerschool>

The purpose of the Summer School is to train students in 'Best Field Practices' for basic taxonomic research, biodiversity studies, and conservation biology. Summer Schools focus on practical taxonomic experience, combined with theoretical lectures, to provide an in depth understanding of the current state of taxonomic research, biodiversity sampling methods and its broad applicability in other scientific disciplines and areas of social relevance.

The Summer School is open to MSc students or early stage PhD students in a biological discipline from EDIT institutions or European universities/institutes. Student and teacher participation is financially supported by EDIT.

The first Summer School 'Modern Taxonomy and Field Work' was held in 2008 (31st August – 14th September), jointly with EDIT's ongoing 'All Taxa Biodiversity Inventory and Monitoring (ATBI+M)' initiative in the French/Italian Alpine nature reserves of Mercantour and Alpi Marittime. ATBI+M activities are part of a global research effort to document spatio-temporal dynamics of biodiversity in conservation priority areas. The Summer School brought together students and training providers from all over Europe: 21 professional taxonomists from 7 European countries gave lectures and field work to 20 students of 16 nationalities from 13 European countries.

The setting for the second Summer School in 2009 'From field to Web - studying biodiversity with the taxonomist's toolbox' was the biodiversity-rich region of the Muránska Planina National Park, Slovakia (19th July – 2nd August). Eighteen professional taxonomists from 13 Universities/Institutes in 10 European countries gave lectures and fieldwork to 20 students from 16 Universities/Institutes in 9 European countries (13 nationalities).

The Summer School provides a unique chance for students to meet professional taxonomists and experience firsthand the challenges and rewards of field work in an inspiring setting.

'Modern Taxonomy' course programme (in progress)

Teaching and training in taxonomy in universities and institutions is provided by a diverse set of approaches, for example, by offering courses in pure and applied taxonomy at various levels, for various durations and with or without formal qualification. There are few dedicated training courses that provide future professionals with fundamental expert knowledge on basic taxonomy.

Some of the recommendations and conclusions from the first DEST meeting are:

- Training is needed at all levels (undergraduate, graduate and postgraduate) but DEST should start to focus on postgraduate levels (MSc and PhD students) so that they can transmit the passion for taxonomy and stimulate the other levels. DEST should set up satellite learning opportunities for a broader range of audience.
- DEST has to offer high profile taxonomy courses => EDIT stamped courses.

- Selection of courses has to be done based on what is already available, and on what people want to share their expertise. Eventual gaps in the present offer, should be covered by contacting specific people.
- DEST courses should be acknowledged by universities.
- Not all courses have to be a priori for free. High quality courses will be solicited.
- It is very important to teach the teachers => train the trainers.

The training curriculum will target topics such as: nomenclature; identification tools and methods; describing species; phylogeny and evolutionary biology; data analysis and management; collection conservation; and relevance of taxonomy to other disciplines and to society in general.

The 'Modern Taxonomy' course programme is being developed in a modular manner so that courses can be offered at several institutions. In this way the courses will give the best quality that partners can offer from their available staff, experiences and equipment. Each partner institution will contribute a different number of subjects depending on the match between the course programme topics and the expertise of the institution. The trainee will attend the course subjects in two ways: face-to-face at the institutions and where appropriate by means of e-learning.

One of the challenges will be to integrate the course programme into current university curricula. The courses will be offered as a new study programme, that preferably should be included in existing teaching programmes at universities, thus emphasising the fundamental importance of taxonomy in the professional formation of future biologists. Moreover, it paves the way for motivating or preparing students for an eventual future taxonomic dissertation or career in taxonomy.

Integration of EDIT tools in the DEST training programme

Geographic Platform components: Geospatial training course

The joint geospatial training course, developed by WP5.4, WP7 and WP8, was given during the second EDIT Summer School in Slovakia by staff from the three WP's. There were several theoretical lessons, but mostly the topics were made clear by demos and practical work in the field or on the computers. Staff was also available for daily support of the students in these issues, so new knowledge was directly applied in a very practical way with opportunity for asking questions as they arose. Topics covered included: basic navigation, basic map theory, georeferencing, practical GPS exercises, GIS (Geographical Information Systems), ATBI+M data and metadata standards, and GBIF data cleaning guidelines.

Scratchpads training course

Scratchpads are an easy to use, social networking, application that enables communities of researchers to manage, share and publish taxonomic data online. Sites are hosted at the NHM London, and offered free to any scientist that completes an online registration form.

In the framework of EDIT taxonomy training, NHM London (WP6) is running a series of four, one-day training events alongside various conferences in 2009. These courses were run at the eBiosphere meeting, NHM London, 4th June and the BioSyst 2009 conference, Leiden, 10th August; they will also be run at the EDIT general meeting, Carvoeiro, 18th December and a special developers course will be organised at the TDWG meeting in Montpellier, November.

These one-day courses are intended to help current and prospective Scratchpad owners develop their site building skills, or to train people to provide scratchpad support at their home institution. Opportunity is given to learn best practice and gain a better understanding of what

the Scratchpads (<http://scratchpads.eu/>) can do for taxonomists and for their research community.

Cooperation avenues between EDIT WP8 and international organisations/networks

Collaboration areas with international organisations/networks have been explored in liaison with WP3. During the recent SPNHC meeting, EDIT was invited to meet the Directors of the Australian Biological Resources Study (ABRS) and the South African National Biodiversity Institute (SANBI) to further explore the potential for collaboration. The meeting was positive and we intend to prepare an 'Agreement to Collaborate' in the final stages of EDIT, and beyond.

For the DEST Summer Schools and Expert-in-training programme, the ABRS is willing to provide financial support. In return, WP8 will open the training opportunities also for ABRS/SANBI trainees.

Next steps in the implementation of the DEST

The 'Modern Taxonomy' training course will be finalised. This will include the list of courses and a network of training providers, the conditions for participation and the launch of the training programme.

Mechanisms have to be identified to guarantee sustainability of the three DEST training components (Summer Schools, Expert-in-training programme, 'Modern Taxonomy' courses): (i) establish an entity that maintains the continuity of DEST, (ii) secure new financial sources for DEST, (iii) integrate DEST courses in an academic framework, (iv) involve international organisations/infrastructures.

Component reports related to D13

C8.2.2 Progress report on the draft course prospectus	http://www.e-taxonomy.eu/node/414
C8.3.1.1 Outline and curriculum for first "summer school" training course(s) at European ATBI+M pilot sites agreed upon	http://www.e-taxonomy.eu/node/282
C8.3.1.2 Report on the first Summer School	http://www.e-taxonomy.eu/node/451
C8.3.1.3 Outline and curriculum of second "summer school" training course(s) at European ATBI+M pilot sites	http://www.e-taxonomy.eu/node/521
C8.3.2.1 Interim report on the pilot expert in training programme	http://www.e-taxonomy.eu/node/413
C8.3.2.2 Progress report on the pilot expert in training programme	http://www.e-taxonomy.eu/node/493
C8.4.1.2 Draft agreement on course prospectus of the DEST	Report delivered M41
C5.071 (relayed from WP5 to WP8) Specification of a joint Geospatial training course [with WP5.4, WP7 and WP8]	Report delivered M41
C6.12 Deliver a training package for scratchpads	Series of four training events in 2009