



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"

C7.4.9 Update of participation, target taxa and applied inventory and monitoring techniques for established European ATBI+M pilot sites

Due date of component: Month 45

Actual submission date: Month 47

Start date of project: 01/03/2006

Duration: 5 years

Organisation name of lead contractor for this component: Partner 12-SMNS, 30-MfN

Revision [end version]

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
Dissemination Level ("X" in the relevant box)		
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)	

Documentation of **participation at established European ATBI+M pilot sites**

- Update for 2009 -

The participation at field surveys -from 2007 to 2009 on the established European ATBI+M pilot sites, Mercantour / Alpi Marittime (PNM/PNAM) and Gemer Area, is documented in this report (Table 1). Field activities started at PNM/PNAM in 2007, while those in the Gemer area were started in 2008.

ATBI+M Mercantour/Alpi Marittime (PNM/PNAM)

A total of 160 signed Terms of Reference (ToRs) for individual participation were received at SMNS Stuttgart between 2007 and 2009. The number of scientists per team ranged between 1 and 11 with an average value of 3.1 in three years (Table 1). Number of days per survey varied between 1 and 21 in the same period. Number of nationalities was 6 in 2007, and increased to 9 in 2008. In 2009, scientists from 11 countries visited the parks (Table 1). Generally, the number of participants was higher in Alpi Marittime when compared with Mercantour, yet it has to be said, that a high proportion of scientists visited both parks. The number of surveys was higher as the number of participants, indicating that a part of the scientists repeatedly visited the sites. The proportion of scientists from EDIT partner institutions further decreased in 2009 (Table 1). This is not an indication that interest from scientists from EDIT partner institutions declined, it moreover shows that interest of scientists from non-EDIT partner institutions to participate at ATBI+M activities remarkably increased.

ATBI+M Gemer area

A total of 47 signed ToRs for individual participation were received at SMNS Stuttgart and MfN Berlin between 2008 and 2009 (Table 1). The number of participants was not as high as in PNM/PNAM during the first and second year and also the number of surveys in the Gemer area (1st year=26; 2nd year=41) was lower compared to the other ATBI+M site. Since 2008 39 Scientists involved in 73 field surveys belonged to nine nations. Remarkably, a strong involvement of scientists from Slovakia, Hungaria, and Czech Republic was noticed. Proportional participation of scientists from EDIT partner institutions was insignificantly higher than that of scientist from non-EDIT partners. The majority of the field surveys were carried out in the Muranska Planina National Park, but the number of surveys in the parks Slovensky Raj and Slovensky Kras has increased in 2009. Field activities at Gemer are expected to be significantly increased in 2010 and scientists having visited PNM/PNAM will be encouraged to participate in this ATBI+M site as well.

Table 1. Participation at field surveys on the European established ATBI+M sites Mercantour/Alpi Marittime and Gemer

Year	ATBI+M PNM/PNAM		ATBI+M Gemer		
	Mercantour	Alpi Marittime	Muranska Planina	Slovensky Raj	Slovensky Kras
2007					
No. of signed ToRs ¹⁾		40			
Average number scientists/team		2.7			
Average number of days / survey		6			
Number of nationalities		6 ²⁾			
Number of participants	22	35			
% EDIT partners	90.9	64.8			
Number of surveys	24	43			
% EDIT partners	91.6	68.8			
2008					
No. of signed ToRs		45		37	
Average number scientists/team		2.7		2.1	
Average number of days / survey		5		4	
Number of nationalities		9 ³⁾		7 ⁴⁾	
Number of participants	33	49		25	
% EDIT partners	54.5	30.6		56.0	
Number of surveys	38	78		26	
% EDIT partners	48.7	21.8		53.8	
2009					
No. of signed ToRs		74		17	
Average number scientists/team		3.9		1.5	
Average number of days / survey		6.0		6.4	

EDIT C7.4.9 Update of participation, target taxa and applied inventory and monitoring techniques for established European ATBI+M pilot sites

	11 ⁵⁾		7 ⁶⁾			
Number of nationalities						
Number of participants	85	58	total 21	15	7	11
% EDIT partners	34.1	20.7	total 52.4	60.0	100	72.7
Number of surveys	112	100	total 41	25	11	19
% EDIT partners	30.3	12.0	total 65.9	56.0	90.9	78.9

1) ToRs = Terms of reference

2) DE, DK, FR, HU, IT, NL

3) AT, BE, DE, DK, FR, HU, IT, NL, UK

4) CZ, DE, FR, HU, IT, PL, SK

5) AT, BE, CZ, DE, DK, FR, IT, NL, SK, SP, UK

6) CZ, DE, HU, IT, SK, BE, Estonia

Documentation of target taxa and applied inventory and monitoring techniques for established European ATBI+M pilot sites

- Update for 2009 -

The third year of field surveys at the ATBI+M site Mercantour/Alpi Marittime and the second year at the ATBI+M site Gemer have been finalized. As of February 2010, a total of 4999 species have been reported from the parks Mercantour and Alpi Marittime (Table 1). In Mercantour, 2933 species have been reported, whereas a total of 3268 species have been recorded in Alpi Marittime. The largest group is represented by the kingdom Animalia, where the presence of 3413 species has been stated. Within the animalia, the class Insecta is the most numerous group, with a total of 3130 species. The second most numerous group is found in the kingdom Plantae with a total of 1008 species (Table 2).

Table 2. Number of species recorded at the ATBI+M site Mercantour/Alpi Marittime from 2007 to 2009.

Kingdom	Phylum	Class	Order	number of species
Animalia	Annelida	Oligochaeta	Opisthopora	12
		Arthropoda	Arachnida	Araneae
			Ixodida	2
			Mesostigmata	12
			Opiliones	22
	Chilopoda		Lithobiomorpha	7
			Scolopendromorpha	1
	Insecta		Coleoptera	689
			Dictyoptera	1
			Diptera	179
			Hemiptera	139
			Hymenoptera	241
			Lepidoptera	1815
			Neuroptera	2
			Odonata	6
			Orthoptera	52
		Siphonaptera	6	
		Chordata	Amphibia	Urodela
	Aves			Passeriformes
			Strigiformes	1
	Mammalia		Insectivora	4
			Rodentia	7
	Mollusca	Reptilia	Squamata	1
Bivalvia		Veneroidea	2	
Gastropoda		Architaenioglossa	2	
		Neotaenioglossa	1	
		Pulmonata	52	
Chromista	Oomycota	Oomycetes	Peronosporales	2
Fungi	Ascomycota	Arthoniomycetes	Arthoniales	1
		Ascomycetes	Acarosporales	6
			Agyriales	2

			Calicales	1
			Capnodiales	5
			Gyalectales	2
			Helotiales	5
			Lecanorales	102
			Leotiales	1
			Orbiliales	1
			Ostropales	5
			Peltigerales	22
			Pyrenulales	1
			Sordariales	2
			Teloschistales	16
			Trichotheliales	1
			Verrucariales	5
			Xylariales	7
		Dothideomycetes	Pleosporales	2
		Lecanoromycetes	Pertusariales	4
		Leotiomycetes	Erysiphales	12
			Rhytismatales	1
		Lichinomycetes	Lichinales	1
		Sordariomycetes	Hypocrales	3
			Phyllachorales	1
	Basidiomycota	Basidiomycetes	Agaricales	67
			Boletales	14
			Cantharellales	3
			Corticiales	2
			Cortinariales	6
			Dacryomycetales	2
			Hymenochaetales	6
			Nidulariales	1
			Polyporales	45
			Russulales	14
			Stereales	22
			Thelephorales	3
			Tremellales	2
		Urediniomycetes	Uredinales	3
Plantae	Bryophyta	Andreaeopsida	Andreaeales	3
		Bryopsida	Bryales	71
			Buxbaumiales	2
			Dicranales	46
			Diphysciales	1
			Encalyptales	9
			Funariales	1
			Grimmiales	56
			Hedwigiales	1
			Hypnales	140
			Orthotrichales	19
			Pottiales	57
			Splachnales	6
			Timmiales	4
		Polytrichopsida	Polytrichales	11

	Sphagnopsida	Sphagnales	15
	Tetraphidopsida	Tetraphidales	1
Lycophyta	Lycopodiopsida	Selaginellales	1
Magnoliophyta	Liliopsida	Asparagales	2
		Juncales	8
		Liliales	8
		Orchidales	7
		Poales	42
	Magnoliopsida	Acerales	2
		Apiales	16
		Asparagales	1
		Asterales	67
		Betulales	1
		Boraginales	4
		Brassicales	19
		Capparales	1
		Caryophyllales	36
		Convolvulales	2
		Cornales	1
		Dipsacales	4
		Ericales	4
		Euphorbiales	3
		Fabales	36
		Fagales	1
		Gentianales	14
		Geraniales	9
		Lamiales	42
		Malpighiales	6
		Malvales	3
		Myrtales	2
		Oleales	1
		Plantaginales	2
		Primulales	6
		Ranunculales	19
		Rhamnales	1
		Rosales	22
		Rutales	1
		Sapindales	2
		Saxifragales	22
		Scrophulariales	5
		Violales	6
	Urediniomycetes	Uredinales	8
Marchantiophyta	Jungermanniopsida	Fossombrniales	1
		Jungermanniales	79
		Metzgeriales	5
		Pelliales	3
		Porellales	11
	Marchantiopsida	Marchantiales	11
Pinophyta	Pinopsida	Pinales	5
Pteridophyta	Polypodiopsida	Polypodiales	12
	Psilotopsida	Ophioglossales	1

Protista	Heterokontophyta	Bacillariophyceae	Achnanthes	16
			Bacillariales	9
			Cymbellales	37
			Eunotiales	9
			Naviculales	57
			Surirellales	2
			Thalassiosiphysales	3
		Coscinodiscophyceae	Aulacoseirales	2
			Melosirales	1
			Orthoseirales	1
			Thalassiosirales	2
		Fragilariophyceae	Fragilariales	24
			Tabellariales	2
			Physarales	5
Myxomycota	Myxomycetes	Stemonitales	4	
		Trichiales	3	

The third most important group in the ATBI+M pilot site Mercantour/Alpi Maritime concerns the kingdom Fungi (Table 2). The largest number of species was reported for the phyla Ascomycota and Basidiomycota (209 and 187, respectively).

A total of 1419 species have been reported as of December 2009 in the Slovenský Raj, Muránska Planina and Slovenský Kras National Parks (Table 3). The largest number of species recorded concerns the kingdom Animalia (755 species), with the majority of species being reported for the Insect orders Diptera and Lepidoptera. The second most important group belongs to the kingdom Plantae (453 species), where so far members of five phyla have been assessed. The number of species belonging to the kingdom Fungi has been increased from 35 to 211 species. Similarly to the ATBI+M site Mercantour/Alpi Maritime, a significant increase in the number of surveys and, consequently, in the number of targeted taxa is expected for the year 2010.

Table 3. Number of species recorded at the ATBI+M site Gemer from 2008 to 2009.

Kingdom	Phylum	Class	Order	number of species		
Animalia	Arthropoda	Arachnida	Araneae	3		
			Pseudoscorpiones	5		
		Insecta	Coleoptera	40		
			Diptera	319		
			Hemiptera	1		
			Hymenoptera	2		
			Lepidoptera	304		
			Ostracoda	Podocopida	24	
			Chordata	Aves	Falconiformes	1
				Passeriformes	3	
		Mammalia		Lagomorpha	1	
				Rodentia	1	
				Reptilia	Squamata	1
			Mollusca	Gastropoda	Pulmonata	50
Fungi	Ascomycota	Ascomycetes	Xylariales	3		
		Leotiomycetes	Helotiales	1		

	Basidiomycota	Basidiomycetes	Agaricales	81
			Auriculariales	3
			Boletales	24
			Cantharellales	4
			Cortinariales	5
			Phallales	1
			Polyporales	28
			Russulales	57
			Stereales	3
			Tremellales	1
Plantae	Bryophyta	Bryopsida	Bryales	17
			Buxbaumiales	1
			Dicranales	9
			Encalyptales	2
			Grimmiales	2
			Hypnales	59
			Orthotrichales	3
			Pottiales	16
		Polytrichopsida	Polytrichales	2
		Tetraphidopsida	Tetraphidales	1
	Magnoliophyta	Liliopsida	Asparagales	4
			Juncales	3
			Liliales	9
			Orchidales	1
			Poales	5
		Lycopsida	Lycopodiales	1
		Magnoliopsida	Acerales	3
			Apiales	19
			Aristolochiales	1
			Asterales	50
			Betulales	3
			Boraginales	6
			Brassicales	11
			Caryophyllales	8
			Celastrales	2
			Convolvulales	3
			Cornales	2
			Crossosomatales	1
			Dipsacales	12
			Ericales	7
			Euphorbiales	4
			Fabales	20
			Fagales	1
			Gentianales	15
			Geraniales	3
			Lamiales	41
			Malpighiales	3
			Malvales	4
			Myrtales	3
			Oleales	2
			Oxalidales	2

		Papaverales	2
		Plantaginales	3
		Primulales	2
		Ranunculales	13
		Rosales	24
		Santalales	1
		Saxifragales	5
		Tiliales	2
		Ulmales	1
		Violales	2
	Urediniomycetes	Uredinales	1
Marchantiophyta	Jungermanniopsida	Jungermanniales	17
		Metzgeriales	4
		Porellales	5
	Marchantiopsida	Marchantiales	2
Pinophyta	Pinopsida	Pinales	2
Pteridophyta	Polypodiopsida	Polypodiales	11

The group with the most diverse sampling techniques was the Coleoptera in the Kingdom Animalia (Table 4). On the contrary, “Manual collecting” and “Observation” were the methods used for the broadest spectrum of organisms. Especially for insects, several types of traps were used, as well as “sweeping” and “netting”. Traps –especially Sherman traps- were also used for Rodentia and Soricimorpha within the Chordata. “Aspiration/Exhaustor” was an additional approach to collect Hymenoptera. The only two groups where sound recording (“Audio”) was used concerned the Dictyoptera and Orthoptera within the insects. Besides of Coleoptera, “Sieving” was employed for Arachnida (Arthropoda) and Pulmonata (Mollusca). New in the year 2009 was the use of hair tubes for collecting probes of rodents (Table 4).

Table 4. Applied inventory techniques at the ATBI+M sites Mercantour/Alpi Maritime and Gemer

Kingdom	Phylum	Class	Order	Manual collecting	Observation	Flotation	Sieving	Beating	Trapping	Sweeping / Netting	Exhaustor / Aspiration	Audio	
Animalia	Annelida	Oligochaeta	Opisthophora	+	+	-	-	-	-	-	-	-	
		Arthropoda	Arachnida	Araneae	+	-	-	+	-	pan, pitfall	+	+	-
	Ixodida			-	-	-	-	-	+	-	-	-	
	Mesostigmata			+	-	-	-	-	-	-	-	-	
	Opiliones		+	-	-	+	-	-	-	-	-	-	
	Pseudoscorpiones		+	-	-	+	-	pan, pitfall	+	+	-		
	Chilopoda		Lithobiomorpha	+	-	-	-	-	-	-	-	-	
			Scolopendromorpha	+	-	-	-	-	-	-	-	-	
	Insecta		Coleoptera	Coleoptera	+	-	+	+	+	pitfall, light trap	+	-	-
				Dictyoptera	+	-	-	-	-	-	-	-	+
			Diptera	-	-	-	-	-	Malaise, beer	+	-	-	
			Hemiptera	+	+	-	-	-	-	+	-	-	
			Hymenoptera	-	-	-	-	-	Malaise, pan	+	+	-	
			Lepidoptera	-	+	-	-	-	light trap	+	-	-	
			Neuroptera	+	-	-	-	-	light trap	+	-	-	
			Odonata	+	-	-	-	-	-	+	-	-	
			Orthoptera	-	+	-	-	-	-	-	-	+	
			Siphonaptera	-	-	-	-	-	+	-	-	-	
	Mollusca		Ostracoda	Podocopida	-	-	-	-	-	-	+	-	-
		Gastropoda	Architaenioglossa	+	-	-	-	-	-	+	-	-	
			Neotaenioglossa	+	-	-	-	-	-	+	-	-	
		Pulmonata	+	-	-	+	-	-	-	-	-		
		Chordata	Amphibia	Urodela	+	+	-	-	-	-	-	-	-
	Aves			-	+	-	-	-	-	-	-	-	
	Passeriformes		Passeriformes	-	+	-	-	-	-	-	-	-	
			Strigiformes	-	+	-	-	-	-	-	-	-	
			Mammalia	Lagomorpha	-	+	-	-	-	-	-	-	
	Rodentia		hair tubes	-	-	-	-	-	Sherman, pitfall	-	-		
	Soricimorpha		-	-	-	-	-	Sherman, pitfall	-	-			
	Reptilia		Squamata	-	+	-	-	-	-	+	-		
Plantae	Bryophyta		several	+	+	-	-	-	-	-	-		
	Lycophyta		Lycopodiopsida	+	+	-	-	-	-	-	-		
	Magnoliophyta	several	+	+	-	-	-	-	-	-			
	Marchantiophyta	several	+	+	-	-	-	-	-	-			
	Pinophyta	Pinopsida	+	-	-	-	-	-	-	-			
	Pteridophyta	Polypodiopsida	+	+	-	-	-	-	-	-			
	Fungi	Ascomycota	several	+	+	-	-	-	-	-	-		
Basidiomycota		several	+	+	-	-	-	-	-	-			
Chromista	Oomycota	Oomycetes	+	+	-	-	-	-	-	-			
Protista	Heterokontophyta	several	+	-	-	-	-	-	-	-			
	Myxomixota	Myxomycetes	+	+	-	-	-	-	-	-			