



PROGRAM - Overview

Schedule	Sunday 4 th	Monday 5 th	Tuesday 6 th	Wednesday 7 th	Thursday 8 th	Friday 9 th
Time	Arrival	Session	Session	Session	Mid tour	Symposia
08:20 am		Opening ceremony		Session 3 Ecology and evolution	Mid conference tour	Keynote 8:30 - 9:00
08:40 am		<i>R. Boyd talk</i>	Session 2 Ecophysiology and genetics	Session 3 Ecology and evolution		Session 8 Agromining
09:00 am		<i>Coffee break</i>	<i>Coffee break</i>	<i>Coffee break</i>		<i>Coffee break</i>
09:20 am		Session 1 Pedosphere and rhizosphere	Session 5 Biogeochemical cycles	Session 7 Biodiversity and systematics		Session 8 Agromining
09:40 am				Poster session 11:50 - 12:50		Keynote 12:00 - 12:30
10:00 am				Lunch 12:50 - 1:50		Lunch 12:30 - 1:40
10:20 am						
10:40 am						
11:00 am						
11:20 am						
11:40 am						
12:00 am						
12:20 am						
12:40 am						
	Arrival of the delegates	Poster session 1:00 - 1:50	Poster session 1:40 - 2:30	Lunch 12:50 - 1:50		Poster session 1:40 - 2:50
01:50 pm		Session 8	Session 3 Ecology and evolution	Session 6 Metal hyperaccumulation		Session 9
02:10 pm		Session 4 Conservation and restoration	<i>Break</i>	<i>Break</i>		<i>Break</i>
02:30 pm						Ultraamafic aquatic chemistry, ecology and ecotoxicology
02:50 pm						General conclusion
03:10 pm						
03:30 pm						
03:50 pm						
04:10 pm						
04:30 pm						
04:50 pm						
05:10 pm						
05:30 pm						

Welcome reception
06:30 pm
08:00 pm

Gala Dinner
8:00pm - 11:00pm

Welcome Dinner
Concluding Dinner



DETAILED PROGRAM - Monday 5th

07:45	Departure of the shuttles from the hotel
08:20 09:20	Opening ceremony
09:20 10:00	A retrospective on International Serpentine Ecology Conferences by Robert Boyd
10:00 10:20	Coffee break
Session 1: Pedosphere and rhizosphere Chairpersons: Zeng-Yei HSEU & Petra KIDD	
10:20 10:40	<u>Fungal community structure along a tropical ultramafic altitudinal transect</u> Brearley Francis (1), Lenzi Luca, Van Der Ent Antony 1 - Manchester Metropolitan University (United Kingdom)
10:40 11:00	<u>Rhizosphere response to nickel stress in hyperaccumulator and non-hyperaccumulator species</u> Rosatto Stefano (1), Roccotiello Enrica (1), Cecchi Grazia (2), Zotti Mirca (2), Mariotti Mauro (1) 1 - University of Genoa, DISTAV Department of Earth, Environment and Life Sciences, Laboratory of Plant Biology (Italy), 2 - University of Genoa, DISTAV Department of Earth, Environment and Life Sciences, Laboratory of Micology (Italy)
11:00 11:20	<u>The bacterial community diversity in the rhizosphere of Ni-hyperaccumulator plants in Albania</u> Lopez Séverine (1), Goux Xavier (2), Echevarria Guillaume (1), Calusinska Magdalena (2), Delfosse Philippe (2), Morel Jean Louis (1), Benizri Emile (1) 1 - Laboratoire Sols et Environnement (France), 2 - Environmental Research and Innovation Department (Luxembourg)
11:20 11:40	<u>Early stages of the serpentine syndrome in the Alps: results from a proglacial area</u> D'amico Michele (1), Freppaz Michele (1), Bonifacio Eleonora (1) 1 - Università degli Studi di Torino - DISAFA (Italy)
11:40 12:00	<u>Determination of the spatial distribution of heavy-metals soil pollution in Elbasan, Albania, by X-Ray fluorescence (XRF) spectrometry</u> Sallaku Fatbardh (1), Tota Odeta (2), Shallari Seit (3), Kristo Ilir (4), Perroy Ryan (5) 1 - Agroenvironment and Ecology Department, Agricultural University of Tirana, Albania (Albania), 2 - European University of Tirana, Albania (Albania), 3 - Agroenvironment and Ecology Department, Agricultural University of Tirana, Albania (Albania), 4 - Agroenvironment and Ecology Department, Agricultural University of Tirana, Albania (Albania), 5 - Geography and Environmental Science, UH Hilo, USA (United States)
12:00 12:10	Conclusion of Session 1
12:10 01:00	Lunch
01:00 01:50	Poster session : Exhibition of posters of session 1 and 4
01:50 02:10	Effect of plant functional traits on soil and ecosystem services to improve agromining, the case of cobalt Faucon Michel-Pierre (1), 1 - UniLaSalle (France)

Session 4: Conservation and restoration	
Chairpersons: Michel-Pierre FAUCON & Bruno Fogliani	
02:10	<p><u>The « CNRT Recosynth » project: analysis and synthesis of restoration operations carried out in New Caledonian mined areas during the last 30 years.</u></p> <p>Amir Hamid (1) 1 - Laboratoire Insulaire du Vivant et de l'Environnement (New Caledonia)</p>
02:30	<p><u>Rehabilitation services carried out by the Company REMIN in open-pit nickel mines of Cuba</u></p> <p>Hernández Fernández Carmen (1), 1 - Instituto Superior Minero Metalurgico (Cuba)</p>
02:50	<p><u>A proposal for the main ultramafic outcrop in SW Europe as a National Park (Sierra Bermeja, Spain)</u></p> <p>Perez-Latorre Andrés V. (1), Gomez-Zotano Jose, Hidalgo-Triana Noelia, Martos-Martin Javier, Navarro-Luengo Ildefonso, Roman-Requena Felipe 1 - Department of Plant Biology (University of Malaga, Spain) (Spain)</p>
03:10	<p><u>Potential of wild thyme for natural revegetation of serpentine quarries</u></p> <p>Mizuno Takafumi (1), Nakahara Yusuke (2), Fujimori Tomoaki (2) 1 - Graduate School of Bioresources, Mie University (Japan), 2 - Faculty of Bioresources, Mie University (Japan)</p>
03:30	Break
03:50	<p><u>Recovery of soil function in a serpentine quarry in Sabah (Malaysia) along an age gradient of the pioneer tree Ceuthostoma terminale</u></p> <p>Quintela-Sabaris Celestino (1), Masfaraud Jean-François, Faucon Michel-Pierre, Repin Rimi, Sugau John, Nilus Reuben, Echevarria Guillaume, Leguédois Sophie 1 - Laboratoire Sols et Environnement (France)</p>
04:10	<p><u>Development of technology for the production of seedlings of native species in ultramafic soils for use in reclamation processes of degraded areas and phytoremediation of Ni</u></p> <p>Andrade Leide (1), 1 - embrapa cerrados (Brazil)</p>
04:30	<p><u>Study and management of narrow endemic ultramafic species in New Caledonia</u></p> <p>B. Fogliani (1), G. Lannuzel (1), M. Dubreuil (1), Fanny Rambaud (1), Lucas Nunez and Laurent Bordez (1), 1- New Caledonian Agronomic Institute (IAC), Port Laguerre, BP 73, 98890 Paita, New Caledonia</p>
04:50	<p><u>Biodiversity and economical challenges in extreme tropical grasslands</u></p> <p>Mahy Grégory (1), Boisson Sylvain (1), Le Stradic Sozig (1), Séleck Maxime (1), Lebrun Julie (1), Faucon Michel-Pierre (2), Ngoy Shutcha Mylor (3) 1 - Biodiversity and Landscape Unit Biosystem engineering - Gembloux Agro-Bio Tech - University of Liege (Belgium), 2 - Institut Polytechnique LaSalle Beauvais (France), 3 - Ecology, Restoration Ecology and Landscape Research Unit - Faculty of Agronomy - University of Lubumbashi (Congo - Kinshasa)</p>
05:10	<p><u>From the characterization of edaphic niche of metallophytes to the implementation of phytostabilisation strategies in Southeastern D.R. Congo</u></p> <p>Boisson Sylvain (1), Le Stradic Sozig (1), Séleck Maxime (1), Lebrun Julie (1), Collignon Julien (1), Garin Olivier (1), Langunu Serge (2), Mbayo Arsène (2), Wetschy Axel (2), Monty Arnaud (1), Ngoy Shutcha Mylor (2), Mahy Grégory (1) 1 - Biodiversity and Landscape Unit Biosystem engineering - Gembloux Agro-Bio Tech - University of Liege (Belgium), 2 - Ecology, Restoration Ecology and Landscape Research Unit - Faculty of Agronomy - University of Lubumbashi (Congo - Kinshasa)</p>
05:30	Conclusion of Session 4
06:00	Return shuttles to hotels

Tuesday 6th

7:45	Departure of the shuttles from the hotel
Session 2 : Ecophysiology and genetics Chairpersons: Takafumi MIZUNO & Joe POLLARD	
08:20 08:40	<u>Whole genome sequencing of the Zn/Ni/Cd hyperaccumulator species Noccaea caerulescens</u> Aarts Mark (1), 1 - Wageningen University (Netherlands)
08:40 09:00	<u>The transcriptome awakens: Convergent mechanisms of Ni hyperaccumulation in plants</u> S García De La Torre Vanesa (1), Marjorel-Louergue Clarisse (2), Barreau Louise (1), Gonzalez Dubiel (3), Brinon Louis-Charles (4), Rigaiil Guillem (5), Brunaud Veronique (5), Thomine Sébastien (1), Aarts Mark (6), Fogliani Bruno (4), Sarramegna Valérie (2), Merlot Sylvain (1) 1 - Institute for Integrative Biology of the Cell (France), 2 - Laboratoire Insulaire du Vivant et de l'Environnement (New Caledonia), 3 - Agrarian university of La Havana (Cuba), 4 - New Caledonian Institute of Agronomy (New Caledonia), 5 - Institute of Plant Sciences - Paris-Saclay (France), 6 - Wageningen University (Netherlands)
09:00 09:20	<u>Harnessing novel soil-microbe-plant interactions to improve plant establishment and eco-physiological resilience during mine site restoration</u> Yong Jean (1) (2), 1 - The University of Western Australia (Australia), 2 - Australian Research Council Centre for Mine Site Restoration (Australia)
09:20 09:40	<u>Interactions of the Manganese Hyperaccumulator Phytolacca americana with Soil pH and Phosphate</u> Degroote Kara (1), Mccartha Grace (1), Pollard Joe (1) 1 - Furman University (United States)
09:40 10:00	<u>Seed germination under nickel stress in hyperaccumulator and non-hyperaccumulator species</u> Roccotiello Enrica (1), Rosatto Stefano (1), Riggi Alex (1), Mariotti Mauro (1) 1 - University of Genoa, DISTAV Department of Earth, Environment and Life Sciences, Laboratory of Plant Biology (Italy)
10:00 10:20	<u>Different mechanisms of nickel hyperaccumulation in Noccaea caerulescens and Alyssum corsicum</u> Schat Henk (1), 1 - Vrije Universiteit Amsterdam [Amsterdam] (Netherlands)
10:20 10:30	Conclusion time of Session 2
10:30 11:00	Coffee break
Session 5: Biogeochemical cycles Chairpersons: Guillaume ECHEVARRIA & Markus PUSCHENREITER	
11:00 11:20	<u>Influence of soil water content on metal release in serpentine soil</u> Gunarathne Viraj (1), Rajakaruna Nishanta (2), Vithanage Meththika (1) 1 - National Institute of Fundamental Studies (Sri Lanka), 2 - California Polytechnic State University (United States)
11:20 11:40	<u>Heavy metals in Kosovo serpentine soils and their impact on food chain</u> Salihaj Muharrem (1), Bani Aida (2) 1 - PhD Candidate at Agricultural University of Tirana (Albania), 2 - Agro-Environmental Department, Faculty of Agronomy and Environment, Agricultural University of Tirana, (Albania)
11:40 12:00	<u>Assessment of trace element biogeochemistry in the rhizosphere using gel based chemical imaging techniques</u> Puschenreiter Markus (1), Hoefler Christoph (1), Santner Jakob (1), Wenzel Walter (1) 1 - University of Natural Resources and Life Sciences Vienna (Austria)

12:00	12:20	<u>Chromium accumulation and risk assessment of brown rice and vegetables grown on serpentine sites in eastern Taiwan</u> Hseu Zeng-Yei (1), Chen Zueng-Sang (2) 1 - Department of Agricultural Chemistry, National Taiwan University (Taiwan), 2 - Department of Agricultural Chemistry, National Taiwan University (Taiwan)
12:20	12:40	<u>Nickel accumulation in paddy rice on serpentine soils containing high geogenic nickel contents in Taiwan</u> Hseu Zeng-Yei (1), Lai Yun-Jie (2), 1 - Department of Agricultural Chemistry, National Taiwan University (Taiwan), 2 - Apollo Technology Co., LTD (Taiwan)
12:40	12:50	Conclusion time
12:50	01:40	Lunch
01:40	02:30	Poster session : Exhibition of posters of session 2, 5 and 3
Session 3 : Ecology and evolution Chairpersons: Robert BOYD & Nishanta RAJAKARUNA		
02:30	02:50	<u>Arthur R. (Art) Kruckeberg, 1920-2016: A Tribute</u> Reeves Roger (1), 1 - Palmerston North (New Zealand)
02:50	03:10	<u>Genetic isolation of serpentine populations of Japanese goldenrods via divergent flowering time and selection against immigrants,</u> Shota Sakaguchi (1), 1 - Kyoto University (Japan)
03:10	03:30	<u>Evolutionary Ecology of Serpentine Plants</u> Rajakaruna Nishanta (1), 1 - California Polytechnic State University (United States)
03:30	03:50	<u>Nickel hyperaccumulation is associated with herbivory tolerance and resistance in <i>Streptanthus polygaloides</i> (Brassicaceae).</u> Mincey Katherine (1), Boyd Robert (1)
03:50	04:10	1 - Department of Biological Sciences [Auburn] (United States)
04:10	04:30	<u>Climate modulates the serpentine syndrome in the Alps</u> D'amico Michele (1), Bonifacio Eleonora, 1 - Università degli Studi di Torino - DISAFA (Italy)
04:30	04:50	<u>Plant performance in geochemical islands</u> Serrano Helena (1), Martins-Loução Maria Amélia (1), Branquinho Cristina (1) 1 - Centre for Ecology, Evolution and Environmental Changes (Portugal)
04:50	05:10	<u>Hyperaccumulators as a model to study plant-fungal interactions</u> Turnau Katarzyna (1), Rozpadek Piotr (2), Jędrzejczyk Roman (2), Wazny Rafal (2), Domka Agnieszka (1) 1 - Institute of Environmental Sciences, Jagiellonian University (Poland), 2 - Małopolska Centre of Biotechnology, Jagiellonian University (Poland)
05:10	05:30	<u>Any peculiarity in lichen communities in ultramafic areas?</u> Favero Longo Sergio Enrico (1), Matteucci Enrica (1), Giordani Paolo (2) 1 - University of Torino (Italy), 2 - University of Genova (Italy)
05:30	05:50	<u>Serpentinophilous lichens ? a case study in the Ural mountains (Russia)</u> Paukov Alexander (1), Teptina Anzhelika, 1 - Ural federal university (Russia)
06:00		Return shuttles to hotels
08:00		Departure of the shuttles from the hotel
08:30	11:00	Gala dinner - Tuesday 6th June (Return shuttles to hotels at the end)

Wednesday 7th

07:45	Departure of the shuttles from the hotel
Session 3 : Ecology and evolution Chairpersons: Robert BOYD & Nishanta RAJAKARUNA	
08:20 08:40	Nickel hyperaccumulation is associated with herbivory tolerance and resistance in <i>Streptanthus polygaloides</i> (Brassicaceae). Mincey Katherine (1), Boyd Robert (1) 1 - Department of Biological Sciences [Auburn] (US)
08:40 09:00	Geo-ecological studies on two ultramafic sites in Ireland Brearley Francis (1), 1 - Manchester Metropolitan University (United Kingdom)
09:00 09:20	Work in progress: Lichen substrate ecology of the Barberton Greenstone Belt, South Africa Medeiros Ian (1), Fryday Alan (2), Pope Nathaniel (3), Frisby Arnold (4), Coetzee Marthie (5), Siebert Stefan (5), Rajakaruna Nishanta (6) (5) 1 - Department of Biology, Duke University (United States), 2 - Department of Biology, Michigan State University (United States), 3 - School of Biological Sciences, University of Texas-Austin (United States), 4 - Department of Plant and Soil Sciences, University of Pretoria (South Africa), 5 - Unit for Environmental Sciences and Management, North-West University-Potchefstroom (South Africa), 6 - Biological Sciences Department, California Polytechnic State University (US)
09:20 09:40	Conclusion time of Session 3
09:40 10 :00	Coffee break
Session 7 : Biodiversity and systematics Chairpersons: Federico SELVI & Ian MEDEIROS	
10:00 10:20	Phylogeny and biogeography of <i>Buxus</i> (Buxaceae) in Cuba and the Caribbean Gonzalez-Gutierrez Pedro (1), Fuentes-Bazan Susy (2), Rankin-Rodriguez Rosa (3), Berazain-Iturralde Rosalina (3), Zoglauer Kurt (4), Köhler Kurt Borsch Thomas (2) 1 - Departamento de Recursos Naturales, CISAT-CITMA (Cuba), 2 - Botanischer Garten und Botanisches Museum, Freie Universität (Germany), 3 - Jardin Botanico Nacional de Cuba, Universidad de La Habana (Cuba), 4 - Institut für Biologie, Humboldt Universität (Germany)
10:20 10:40	PLANT DIVERSITY OF USSANGODA SERPENTINE SITE IN SRI LANKA Iqbal Mohamed (1), 1 - National Institute of Fundamental Studies (Sri Lanka)
10 :40 11:00	Contributions to the Serpentine Flora of Turkey Kurt Latif (1), Ozbey Beste Gizem (1), Ozdeniz Ebru (1), Bolukbasi Aysenur (1) 1 - ANKARA UNIVERSITY (Turkey)
11:00 11:20	Phylogenetic and Geographic Distribution of Nickel Hyperaccumulation in Neotropical Psychotria (<i>Rubiaceae</i>) Mccartha Grace (1), Taylor Charlotte (2), Pollard Joe (1) 1 - Furman University (United States), 2 - Missouri Botanical Garden (United States)
11:20 11:40	The genus <i>Odontarrhena</i> in Albania: disentangling the systematics of a critical group of Ni-hyperaccumulators in a European serpentine hotspot Selvi Federico (1), Lorenzo Cecchi (2), Ilaria Colzi (3), Andrea Coppi (3), Guillaume Echevarria (4), Cristina Gonnelli (3) 1 - Dipartimento di Scienze delle Produzioni Agroalimentari e dell'Ambiente (Italy), 2 - Museo di Storia Naturale, Sezione Botanica, Università di Firenze, Italy, 3 - Dipartimento di Biologia, Università di Firenze, Italy, 4 - Laboratoire Sols et Environnement UMR 1120, Université de Lorraine - INRA, France
11 :40 11 :50	Conclusion time of Session 7
11:50 12:50	Poster session : Exhibition of posters of session 3, 7 and 6
12:50 1:50	Lunch

Session 6 : Metal hyperaccumulation Chairpersons: Alan BAKER & Antony VAN DER ENT		
01:50	02:10	The Global Hyperaccumulator Database Reeves Roger (1), Van Der Ent Antony (2), Baker Alan (3), Jaffré Tanguy (4) 1 - Palmerston North (New Zealand), 2 - Centre for Mined Land Rehabilitation, Sustainable Minerals Institute, University of Queensland (Australia), 3 - School of BioSciences, University of Melbourne, Parkville, VIC 3010 (Australia), 4 - IRD, UMR AMAP, Laboratoire de Botanique et d'Ecologie Végétale Appliquées, Herbarium NOU, Nouméa (New Caledonia)
02:10	02:30	A Re-examination of the Elemental Composition of Some Caryophyllaceae on North American Serpentine Reeves Roger (1), Kruckeberg Arthur, 1 - Palmerston North (New Zealand)
02:30	02:50	Hyperaccumulator discoveries through XRF scanning in New Caledonia Gei Vidiro (1), Erskine Peter (1), Echevarria Guillaume (2), Isnard Sandrine (3), Tanguy Jaffré (3), Van Der Ent Antony (1) 1 - Centre for Mined Land Rehabilitation, Sustainable Minerals Institute, The University of Queensland, Australia. (Australia), 2 - Université de Lorraine-INRA (France), 3 - IRD, UMR AMAP, Laboratoire de Botanique et d'Ecologie Végétale Appliquées (New Caledonia)
02:50	03:10	Metal Hyperaccumulating Brassicaceae from the ultramafic area of Yahyal? in Kayseri province, Turkey Aksoy Ahmet (1), çelik Jale, Leblebici Zeliha, 1 - Akdeniz University (Turkey)
03:10	03:30	Hyperaccumulation of nickel in ultramafic areas of the Balkans: what are the trade-off between accumulated elements? Echevarria Guillaume (1), 1 - Laboratoire Sols et Environnement (France)
03:30	03:50	Break
03:50	04:10	X-ray elemental imaging of the nickel hyperaccumulator plants <i>Rinorea bengalensis</i> and <i>R. javanica</i> (Violaceae) from Sabah (Malaysia) Van Der Ent Antony (1), (2), De Jonge Martin (3), Mak Rachel (4), Barnabas Alban (5), Przybylowicz Wojciech (5), Harris Hugh (6), Mesjasz-Przybylowicz Jolanta (5) 1 - Centre for Mined Land Rehabilitation, Sustainable Minerals Institute, The University of Queensland (Australia), 2 - Université de Lorraine INRA, Laboratoire Sols et Environnement, UMR 1120 (France), 3 - Australian Synchrotron (Australia), 4 - Department of Chemistry, University of Sydney (Australia), 5 - Materials Research Department, iThemba LABS, NRF (South Africa), 6 - Department of Chemistry, The University of Adelaide (Australia)
04:10	04:30	Nickelophilic foraging by roots of the Ni hyperaccumulator, <i>Streptanthus polygaloides</i> (Brassicaceae). Mincey Katherine (1), Boyd Robert (1), 1 - Department of Biological Sciences [Auburn] (US)
04:30	04:50	The relationship between Ni hyperaccumulator <i>Alyssum murale</i> and the parasitic plant <i>Orobanche nowackiana</i> from serpentine in Albania Bani Aida (1), Pavlova Dolja (2), Echevarria Guillaume (3), Shallari Seit (1), Miho Liri (1), Meco Mariol (4) 1 - Environmental Department, Faculty of Agronomy and Environment, Agricultural University of Tirana, (Albania), 2 - Department of Botany, Faculty of Biology, University of Sofia (Bulgaria), 3 - Laboratoire Sols et Environnement, Nancy-Université, (France), 4 - Department of Biology, Faculty of Natural Science, University of Tirana (Albania)
04:50	05:10	Hyperaccumulator discovery in Halmahera, Indonesia Erskine Peter (1), 1 - The University of Queensland [Brisbane] (Australia)
05:10	05:30	Influence of subsoil and soil volume on the accumulation of nickel by <i>Alyssum corsicum</i> grown on a serpentine soil Paul Adrian (1), (2), (3), Baklanov Ilya (4), Chaney Rufus (1) 1 - Crop Systems and Global Change Laboratory (United States), 2 - ISA Lille (France), 3 - Centre for Mined Land Rehabilitation (Australia), 4 - UMD Department of Civil and Environmental Engineering (United States)
05:30	05:40	Conclusion time of Session 6

Friday 9th - Symposia

Session 8 : Agromining Chairpersons: Aida BANI & Marie-Odile SIMONNOT		
08:30	09:00	Domestication of <i>Alyssum murale</i> and <i>A. corsicum</i> for Ni phytomining. Chaney Rufus (1) 1 - Crop Systems and Global Change Laboratory (United States)
09:00	09:20	Implementing nickel agromining field trials in an ultramafic area of NW Spain. Kidd Petra (1), Pardo Tania, Soto-Vázquez José Luis, Prieto-Fernández ángeles, Rodríguez-Garrido Beatriz, Saad Ramez (2), Echevarria Guillaume (2), Benizri Emile (2) 1 - Instituto de Investigaciones Agrobiológicas de Galicia, Consejo Superior de Investigaciones Científicas (CSIC) (Spain), 2 - Laboratoire Sols et Environnement (France)
09:20	09:40	Improvement of Ni phytoextraction by Ni-hyperaccumulators of the genus <i>Alyssum</i> using rhizobacterial inoculants Ghasemi Zahra, Ghaderian S. Majid (1), Kidd Petra 1 - Department of Biology, University of Isfahan (Iran)
09:40	10:00	Developing Ni-agromining by associating <i>Alyssum murale</i> with a leguminous plant: an in-situ experiment on an ultramafic site in Spain Saad Ramez (1), (2) 1 - Université Libanaise (Lebanon), 2 - Laboratoire Sols et Environnement (France)
10:00	10:20	First growth trial of tropical 'metal shrubs' to be used in economic agromining Nkrumah Philip Nti (1), Echevarria Guillaume (2), Erskine Peter D. (1), Van Der Ent Antony (1), Sumail Sukaibin (3) 1 - Centre for Mined Land Rehabilitation, The University of Queensland (Australia), 2 - Laboratoire Sols et Environnement (France), 3 - Sabah Parks (Malaysia)
10:20	10:40	Coffee break
10:40	11:00	The Phytomining of nickel from industrial polluted site of Elbasan-Albania Osmani Marilda (1) 1 - Department of Chemistry, Faculty of Natural Sciences, 'Aleksandër Xhuvani' University, Elbasan, Albania (Albania)
11:00	11:20	Energy recovery from nickel hyperaccumulator plants Hazotte Claire (1), Laubie Baptiste (1), Saad Ramez (2), Rue Marie (2), (1), Benizri Emile (2), Echevarria Guillaume (2), Morel Jean Louis (2), Kidd Petra (3), Simonnot Marie-Odile (1) 1 - Laboratoire Réactions et Génie des Procédés (CNRS-UL UMR 7274) (France), 2 - Laboratoire Sols et Environnement (France), 3 - Instituto de Investigaciones Agrobiológicas de Galicia, Consejo Superior de Investigaciones Científicas (CSIC) (Spain)
11:20	11:40	Towards a new process to recover nickel from hyperaccumulator plants Guilpain Mathilde (1), Simonnot Marie-Odile (1), Laubie Baptiste (1) 1 - Laboratoire Réactions et Génie des Procédés (France)
11:40	12:00	Land use impacts in life cycle assessment of agromining Pons Marie-Noëlle (1), Rodrigues Jérémy (1), Simonnot Marie-Odile (1), Morel Jean-Louis (2), Echevarria Guillaume 1 - Laboratoire Réactions et Génie des Procédés (France), 2 - Laboratoire Sols et Environnement (France)
12:00	12:30	Conclusions and Outlook for Agromining Morel Jean-Louis (1), 1 - Laboratoire Sols et Environnement (France)

12:30	01:40	Lunch
01:40	02:50	Poster session : Exhibition of posters of session 8 and 9
Session 9 : Ultramafic aquatic chemistry, ecology and ecotoxicology Chairpersons: Laure GIAMBERINI & Spase SHUMKA		
02:50	03:10	Water quality under the effect of erosion of ultrabasic formations and mining activity in Mitrovica Musliu Afete (1), Shallari Seit 1 - Agricultural University of Tirana (Albania)
03:10	03:30	Physicochemical characteristics, substrate heterogeneity and biodiversity of rivers in the ultramafic massif of Beni Bousera and adjacent non-ultramafic sites (NW, Morocco) Khadri Osama (1), El Alami Majida, El Bazi Rachida, Slimani Myriam, Ater Mohammed 1 - Laboratoire Ecologie, Biodiversité et Environnement, département de biologie, Faculté des sciences, Université Abdelmalek Essaâdi, Tétouan, Maroc. (Morocco)
03:30	03:50	Are trace metals bioaccumulated and toxic for aquatic organisms? A study along the ultramafic shoreline of Lake Ohrid (Albania) Minguez Laetitia (1), Gross Elisabeth (1), Vignati Davide (1), Wagner Philippe (1), Rousselle Philippe (1), Imeri Alma (2), Bani Aida (3), Pain-Devin Sandrine (1), Devin Simon (1), Guérold François (1), Giamberini Laure (1) 1 - Laboratoire Interdisciplinaire des Environnements Continentaux (France), 2 - Department of Plant Production, Faculty of Agriculture and Environment, Agricultural University of Tirana (Albania), 3 - Agro-Environmental Department, Faculty of Agriculture and Environment, Agricultural University of Tirana (Albania)
03:50	04:10	Break
04:10	04:30	Effects of ultramafic area and industrial activities on water quality of Shkumbini River, Albania Bani Aida (1), Kristo Ilir (2), Shumka Spase (3), Kupe Lirika (4), Pepa Bledar (5), Duka Irena (2), Dervishi Oljan (2) 1 - Environmental Department, Faculty of Agronomy and Environment, Agricultural University of Tirana, (Albania), 2 - Environmental Department, Faculty of Agronomy and Environment, Agricultural University of Tirana. Albania (Albania), 3 - Department of food Science and Biotechnology, Faculty of Biotechnology and Food, Agricultural University of Tirana, Albania (Albania), 4 - Department of Plant and Science Technology, Faculty of Agronomy and Environmental, Agricultural University of Tirana, Albania (Albania), 5 - Department of Biology, Faculty of Technical Sciences, ?Ismail Qemali? University, Albania (Albania)
04:30	04:50	Chromium chemistry at Pluhuv Bor, an ultramafic Czech catchment Kram Pavel (1) 1 - Czech Geological Survey (Czech Republic)
04:50	05:00	Conclusion time of Session 9
05:00		General conclusion



POSTER SESSIONS

Session 1: Pedosphere and rhizosphere	
p.47	<p>Phosphorus limitations and mycorrhizae in a proglacial serpentinitic area</p> <p>Bonifacio Eleonora (1), Martin Maria (1), D'amico Michele (1), Castelli Fabio (1), Sineo Giulia (1), Almeida Juan Pablo, Wallander Hakan (2), Celi Luisella (1)</p> <p>1 - Università degli Studi di Torino - DISAFA (Italy), 2 - Department of Biology - University of Lund (Sweden)</p>
p.48	<p>The cumulative particle size distribution curves characterizing some typical ultramafic soils in Albania</p> <p>Gjongecaj Besnik (1), Lekaj Oliver (1), Mziu Pranvera (1)</p> <p>1 - Agricultural University of Tirana (Albania)</p>
p.49	<p>Monitoring Land Cover Changes and Erosion Risk for Land Use Planning Purposes</p> <p>Malltezi Jamarber (1)</p> <p>1 - Environmental Department, Faculty of Agronomy and Environment, Agricultural University of Tirana, (Albania)</p>
p.50	<p>The dependency of erodibility from the soil texture in ultramafic substrates of Albanian soils</p> <p>Gjongecaj Besnik (1), Mziu Pranvera (1), Lekaj Oliver (1)</p> <p>1 - Agricultural University of Tirana (Albania)</p>
p.51	<p>Effect of inoculation of arbuscular mycorrhizal fungi (AMF) and cultivation of <i>Axonopus chrysoblepharis</i> on the development of <i>Mimosa caussenei</i> in ultramafic soils, Barro Alto (GO)</p> <p>Cícero Pereira (1), Tatiane Matias (2), Bárbara Pachêco (2); Eudaci Bezerra (2) and Leide Rovênia Andrade (1)</p> <p>1 - Natural Resources, Embrapa Cerrados, Brazil ; 2 - Fundação de Apoio à Pesquisa Tecnológica Eliseu Alves, Brazil</p>
p.52	<p>Ethno-Geographical Relation to Wildlife Crime in Nepal: Analysis of Case Reported in National Print Media</p> <p>Puri Ganesh (1)</p> <p>1 - Department of Forest Nepal (Nepal)</p>
p.53	<p>Kinetic assessment of metal tolerant PGPRs for bio-repairing of multi-metal contaminated brown fields of Chelyabinsk region, Russia</p> <p>Tripti Tripti (1), Kumar Adarsh, Maleva Maria, Kiseleva Irina</p> <p>1 - Ural Federal University, Russia (Russia)</p>

Session 2: Ecophysiology and genetics

p.62	<p>Histology and body growth of newborn earthworms <i>Dendrobaena veneta</i> (Rosa, 1886) exposed to nickel</p> <p>Ferrando Sara (1), Roccotiello Enrica (2), Amaroli Andrea (3), Gallus Lorenzo (1), Rottigni Marino (1), Rosatto Stefano (2), Gambardella Chiara (4), Mariotti Mauro (2)</p> <p>1 - University of Genoa, DISTAV Department of Earth, Environment and Life Sciences (UNIGE-DISTAV) (Italy), 2 - University of Genoa, DISTAV Department of Earth, Environment and Life Sciences, Laboratory of Plant Biology (Italy), 3 - University of Genoa- Department of Surgical Science (Italy), 4 - National Research Council- Institute of Marine Sciences (Italy)</p>
p.63	<p>Effects of nickel oxide nanoparticles on growth and antioxidant defense systems of <i>Brassica napus</i></p> <p>Najafi Shiva (1), Karimi Naser (2)</p> <p>1 - Shiva (Iran), 2 - Naser (Iran)</p>
p.64	<p>Selenium alleviates drought stress in <i>Astragalus adscondenes</i> by improving plant growth, photosynthesis and antioxidant defences</p> <p>Karimi Naser (1), Saran Fatemeh (2)</p> <p>1 - Naser (Iran), 2 - Fatemeh (Iran)</p>
p.65	<p>Plastid genome variation within the nickel hyperaccumulator <i>Streptanthus polygaloides</i> (Brassicaceae) and its phylogenetic implications.</p> <p>Mincey Katherine (1), Melton Anthony, Hall Nathan, Goertzen Leslie, Boyd Robert (1)</p> <p>1 - Department of Biological Sciences [Auburn] (United States)</p>
p.66	<p>Effect of different iron concentrations and lead pollution on growth <i>Matthiola flavida</i> Boiss.</p> <p>Mohtadi Ahmad (1), Heidari Amin (1)</p> <p>1 - Department of Biology, Yasouj University, Iran (Iran)</p>
p.67	<p>Tolerance and accumulation of nickel and zinc in <i>Tanacetum polycephalum</i></p> <p>Mohtadi Ahmad (1), Jamali Hajiani Naser (2)</p> <p>1 - Department of Biology, Yasouj University, Iran (Iran), 2 - Department of Biology, Ilam University, Iran (Iran)</p>
p.68	<p>Nickel effect on root meristem cell division in <i>Plantago lanceolata</i> (Plantaginaceae) seedlings</p> <p>Pavlova Dolja (1)</p> <p>1 - University of Sofia (Bulgaria)</p>
p.69	<p>Differential interactive effects of the Ca/Mg ratio and PEG-simulated drought in <i>Alyssum inflatum</i> and <i>Fortuynia garcinii</i></p> <p>Salehi Eskandari Behroos Ghaderian S. Majid (1), Schat Henk</p> <p>1 - Department of Biology, University of Isfahan (Iran)</p>

p.70	Assessment of heavy metal tolerance of <i>Alyssum obovatum</i> (C.A.Mey.) Turcz. on contaminated soils of Karabash ultramafic massif, Russia Teptina Anzhelika (1), Chukina Nadezhda (1), Shaihova Darya (1), Sitnikov Ivan (1), Paukov Alexander (1), Kiseleva Irina (1) 1 - Ural federal university (Russia)
p.71	Ploidy level and chromosome number of Brassicaceae and Caryophyllaceae species on ultramafic soils in the Urals, Russia Teptina Anzhelika (1), Paukov Alexander (1), Gordyusheva Ekaterina (1), Chebykina Natalya (1) 1 - Ural Federal University (Russia)
p.72	Effect of edaphic factors on the phenology and Ni-accumulation in <i>Alyssum murale</i> in Albania. Xhaferri Besmira (1), Bani Aida (1), Echevarria Guillaume 1 - Agro-Environmental Department, Faculty of Agronomy and Environment, Agricultural University of Tirana, Albania (Albania)

Session 3: Ecology and evolution	
p.87	Serpentine ecosystems and Ni hyperaccumulator <i>Alyssum</i> genus habitats in Albania Shallari Seit (1), çuni Eridana 1 - Agroenvironment and Ecology Department, Agricultural University of Tirana, Albania (Albania)
p.88	Functional types and functional groups in Mediterranean ultramafic shrublands (Sierra Bermeja, Spain) Hidalgo-Triana Noelia (1), Pérez Andrés 1 - Vegetal Biology Department (Botany), University of Malaga, Spain (Spain)
p.89	Little evidence for local adaptation to soil type by <i>achillea millefolium</i> and <i>hypericum perforatum</i> from deer isles, maine, USA Krell Natasha (1), Negoita Luka (2), Rajakaruna Nishanta (3) 1 - University of California (United States), 2 - Syracuse University (United States), 3 - California Polytechnic State University (United States)
p.91	An analysis of land covers categories on serpentine soils of Albania Lekaj Enkelejd (1), Teqja Zydi (1), Bani Aida (2) 1 - Department of Horticulture and Landscape Architecture, Agricultural University of Tirana, Albania (Albania), 2 - Department of Agro environment and Ecology, Agricultural University of Tirana, Albania (Albania)
p.92	Influence of edaphic and environmental factors on vegetation in the Middle and Southern Urals, Russia Teptina Anzhelika (1), Paukov Alexander (1) 1 - Ural Federal University (Russia)

Session 4: Conservation and restoration	
p.103	<p>Study and management of narrow endemic ultramafic species in New Caledonia</p> <p>Fogliani Bruno (1), Lannuzel Guillaume (1), Dubreuil Marie (1), Rambaud Fanny (1), Nunez Lucas (1), Bordez Laurent (1)</p> <p>1 - New Caledonian Agronomic Institute (New Caledonia)</p>
p.104	<p>Phytoremediation of metalliferous soil of an abandoned chromite?asbestos mine facilitated by native grasses and legumes</p> <p>Kumar Adarsh (1), Tripti Tripti (2), Maiti Subodh (3), Prasad Majeti (4), Singh Rajshekhar (5)</p> <p>1 - Ural Federal University, Russia (Russia), 2 - Ural Federal University (Russia), 3 - Indian Institute of Technology (Indian School of Mines) (India), 4 - University of Hyderabad (India), 5 - Central Institute of Mining and Fuel Research (India)</p>
p.105	<p>Herbagegreen ? a new technique for ecological agriculture</p> <p>Maci Ardian (1), Prifti Doreza (2), Miho Liri (1)</p> <p>1 - Department of Agro environment and Ecology, Agricultural University of Tirana, Albania (Albania), 2 - Department of Horticulture, University Fan. S. Noli?, Korçe, Albania (Albania)</p>
p.106	<p>Establishing Merxmuellera disticha (Poaceae) on kimberlite tailings in the afro-alpine zone of Lesotho</p> <p>Ntloko Bongani (1), Siebert Stefan (2), Ayres Philip (3)</p> <p>1 - Letseng Diamonds (Lesotho), 2 - North-West University (South Africa), 3 - Green Thorn Environmental Solutions (South Africa)</p>
p.107	<p>Plant functional traits on serpentine degraded areas in Sabah (Malaysia), a potential tool for its reclamation</p> <p>Quintela-Sabaris Celestino (1), Faucon Michel-Pierre, Repin Rimi, Sugau John, Nilus Reuben, Echevarria Guillaume, Leguédois Sophie</p> <p>1 - Laboratoire Sols et Environnement (France)</p>
p.108	<p>Plant, microbial and soil patterns of rehabilitated ultramafic tailings facilities at Phalaborwa, South Africa</p> <p>Smith Dawid (1), Siebert Stefan (1), Claassens Sarina (1), Bezuidenhout Jaco (1), Komape Dennis (1), Swemmer Anthony (2)</p> <p>1 - North-West University (South Africa), 2 - South African National Observation Network (South Africa)</p>
p.109	<p>The Nickel Hyperaccumulator Garden in Sabah, Malaysia</p> <p>Sumail Sukaibin (1), Karim Rossiti (1), Repin Rimi (1), Buang Matsain Mohd. (1), Van Der Ent Antony (2), (3), Nkrumah Philip Nti (3)</p> <p>1 - Sabah Parks (Malaysia), 2 - Laboratoire Sols et Environnement, Université de Lorraine-INRA (France), 3 - Centre for Mined Land Rehabilitation, Sustainable Minerals Institute, The University of Queensland (Australia)</p>

Session 5: Biogeochemical cycles	
p.117	<p>Solubility of Chromium, Nickel, and Cobalt controlled by oxidation-reduction cycles in serpentine soils</p> <p>Chen Hsin-Yu (1), Hseu Zeng-Yei (1), Chen Zueng-Sang (1)</p> <p>1 - Department of Agricultural Chemistry, National Taiwan University (Taiwan)</p>
p.118	<p>Patterns in nickel concentrations among populations of the high-Ni insect <i>Melanotrichus boydi</i> (Hemiptera: Miridae), a specialist on the Ni hyperaccumulator plant <i>Streptanthus polygaloides</i> (Brassicaceae)</p> <p>Choi Jiyeong (1), Cobine Paul (1), Mincey Katherine (1), Boyd Robert (1)</p> <p>1 - Department of Biological Sciences [Auburn] (United States)</p>
p.119	<p>Release of Cr from serpentine soils by persulfate treatments</p> <p>Dai Sih-Syuan (1), Hseu Zeng-Yei (2), Chen Zueng-Sang (3)</p> <p>1 - Department of Agricultural Chemistry, National Taiwan University (Taiwan), 2 - Department of Agricultural Chemistry, National Taiwan University (Taiwan), 3 - Department of Agricultural Chemistry, National Taiwan University (Taiwan)</p>
p.120	<p>The role of Sage plant in heavy metals uptake from wastewater</p> <p>Duka Irena (1), Duka Sonila (2), Shallari Seit (3), Maci Ardian (4), Shehu Julian (5)</p> <p>1 - Environmental Department, Faculty of Agronomy and Environment, Agricultural University of Tirana, Albania (Albania), 2 - Department of Chemistry, Faculty of Natural Sciences, University of Tirana, Albania (Albania), 3 - 1Department of Agro environment and Ecology, Agricultural University of Tirana, Albania (Albania), 4 - Department of Agro environment and Ecology, Agricultural University of Tirana, Albania (Albania), 5 - 1Department of Agro environment and Ecology, Agricultural University of Tirana, Albania (Albania)</p>
p.121	<p>Accumulation of heavy metals in apple tissues grown in the soils of industrial area</p> <p>Imeri-Millaku Resmije (1), Kullaj Endrit (1), Bani Aida (1), Millaku Lulzim (2)</p> <p>1 - UBT (Albania), 2 - UP (Albania)</p>
p.122	<p>Accumulation of chromium and nickel in native plants growing on soils of Faryab mining area</p> <p>Jamali Hajiani Naser (1), Bagherzadeh Homae Mozafar (2), Ghaderian Seyed Majid (3)</p> <p>1 - Department of Biology, Faculty of Sciences, Ilam University (Iran), 2 - Farhangian University (Iran), 3 - Department of Biology, Faculty of Sciences, University of Isfahan (Iran)</p>
p.123	<p>Nickel accumulation in plants growing in Patyar serpentine soils</p> <p>Jamali Hajiani Naser (1), Ghaderian Seyed Majid (2), Karimi Naser (3)</p> <p>1 - Department of Biology, Faculty of Sciences, Ilam University (Iran), 2 - Department of Biology, Faculty of Sciences, University of Isfahan (Iran), 3 - Department of Biology, Faculty of Sciences, Razi University (Iran)</p>
p.124	<p>Biotransfer and bioaccumulation of cadmium along a soil-broad bean-aphid- ladybird food chain</p> <p>Naikoo Mohd Irfan (1)</p> <p>1 - Department of Botany, Aligarh Muslim University, Aligarh (India)</p>

p.125	Chromium uptake by plants: evidence from chromitite outcrops of the Rustenburg Layered Suite, South Africa
	Siebert Stefan (1), Beukes Paul (1), Van Zyl Pieter (1), Rajakaruna Nishanta (2), Siebert Frances (1) 1 - North-West University (South Africa), 2 - California Polytechnic State University (United States)
p.126	Nickel Isotopic Fractionation when reacting with Organic Acids and the role of Hyperaccumulating plants
	Echevarria Guillaume (1) 1 - Laboratoire Sols et Environnement (France)

Session 6: Metal hyperaccumulation	
p.137	A manganese accumulating aloe from ultramafic substrates in the Vredefort Dome, South Africa
	Boneschans Ricart (1), Steytler Janine (1), Siebert Stefan (1) 1 - North-West University (South Africa)
p.138	Effect of Soil Volume on Nickel Hyperaccumulation by <i>Alyssum corsicum</i> Chaney Rufus (1), Baklanov Ilya (2), Ryan Thomas (3), Paul Adrian (4), (5), (1), Davis Allen (6)
	1 - Crop Systems and Global Change Laboratory (United States), 2 - UMD Department of Civil and Environmental Engineering (United States), 3 - Paint Branch High School (United States), 4 - ISA Lille (France), 5 - Center for mined land rehabilitation (Australia), 6 - UMD Department of Civil and Environmental Engineering (United States)
p.139	Hyperaccumulator flora of Albanian serpentine soils: <i>Alyssum murale</i> potential for soil nickel hyperaccumulation
	Shallari Seit (1) 1 - Agroenvironment and Ecology Department, Agricultural University of Tirana, Albania (Albania)
p.140	Inoculation of <i>Alyssum murale</i> with PGPR strains with different patterns of nickel bioaccumulation
	Lopez Séverine (1), Echevarria Guillaume (1), Watteau Françoise (1), Morel Jean Louis (1), Benizri Emile (1) 1 - Laboratoire Sols et Environnement (France)
p.141	Ni-hyperaccumulator plants in the watershed of the middle flow of Devoll River and their distribution in Albania
	Meco Marjol (1), Mullaj Alfred (2), Bani Aida (3) 1 - Department of Biology, Faculty of Natural Science, University of Tirana, Albania (Albania), 2 - Research Center for Flora and Fauna, Faculty of Natural Sciences, University of Tirana, Albania (Albania), 3 - Agro-Environmental Department, Faculty of Agronomy and Environment, Agricultural University of Tirana, Albania (Albania)
p.142	Salicylic acid and methyl Jasmonate improves seed germination, growth parameters and regulates antioxidant enzymes in the nickel hyperaccumulating plant <i>Alyssum inflatum</i> Nyár.
	Najafi Shiva (1), Tavan Meneh (2), Karimi Naser (3) 1 - Shiva (Iran), 2 - Ameneh (Iran), 3 - Naser (Iran)

p.143	<p>Ultramafic (serpentine) habitats and traces of metal hyperaccumulation in Mexico</p> <p>Navarrete Gutierrez Dulce Montserrat (1), Echevarria Guillaume (1), Pons Marie-Noëlle (2) 1 - Laboratoire Sols et Environnement (France), 2 - Laboratoire Réactions et Génie des Procédés (France)</p>
p.144	<p>Influence of subsoil and soil volume on the accumulation of nickel by <i>Alyssum corsicum</i> grown on a serpentine soil</p> <p>Paul Adrian (1), (2), (3), Baklanov Ilya (4), Chaney Rufus (1) 1 - Crop Systems and Global Change Laboratory (United States), 2 - ISA Lille (France), 3 - Centre for Mined Land Rehabilitation (Australia), 4 - UMD Department of Civil and Environmental Engineering (United States)</p>
p.145	<p>A new nickel hyperaccumulator in the Asteraceae on serpentinite of the Barberton Greenstone Belt, South Africa</p> <p>Siebert Stefan (1), Rajakaruna Nishanta (2), Schutte Nadine (1), Boneschans Ricart (1), Komape Dennis (1), Bester Pieter (3) 1 - North-West University (South Africa), 2 - California Polytechnic State University (United States), 3 - South African National Biodiversity Institute (South Africa)</p>
p.146	<p>Foliar elemental profiles in the ultramafic flora of Sekhukhuneland, South Africa</p> <p>Siebert Stefan (1), Siebert Frances (2), Bezuidenhout Jaco (1) 1 - North-West University (South Africa), 2 - North-West University (South Africa)</p>

Session 7: Biodiversity and systematics	
p.153	<p>Catalogue of the plants and other traditionally considered vegetal organisms of the Botanic Garden of the University of Coimbra</p> <p>Almeida João (1) 1 - Centre for Functional Ecology (Portugal)</p>
p.154	<p>Endemism in the flora of the Griqualand West manganese fields, South Africa</p> <p>Frisby Arnold (1), Siebert Stefan (2), Van Staden Nanette (2), Cilliers Dirk (2) 1 - University of Pretoria (South Africa), 2 - North-West University (South Africa)</p>
p.155	<p>A preliminary survey of lichens associated with serpentinite rocks in Ussangoda, Sri Lanka</p> <p>Jayalal Udeni (1), Rajakaruna Nishantha (2), Iqbal Mcm (3), Wijesundara Siril (4) 1 - Department of Natural Resorces (Sri Lanka), 2 - Biological Sciences Department, California Polytechnic State University (United States), 3 - Department of Plant Biology (Sri Lanka), 4 - Department of Biodiversity and Coservation (Sri Lanka)</p>
p.156	<p>Begonias (Begoniaceae) from ultramafic soils in Sabah, Malaysia</p> <p>Repin Rimi (1), Karim Rossiti (1) 1 - Sabah Parks (Malaysia)</p>
p.157	<p>Ecotypic variations among <i>Falcatifolium gruezoi</i> de Laubenfels (Podocarpaceae) Philippine collections</p> <p>Salvador Ma. Eleanor (1), Gruezo William (2) 1 - Polytechnic University of the Philippines (Philippines), 2 - University of the Philippines Los Banos, Laguna (Philippines)</p>

p.158	<p>Three new species of <i>Stylochaeton</i> Lepr. (Araceae) from ultramafic soils, South Africa</p> <p>Siebert Stefan (1), Struwig Madeleen (2), Rajakaruna Nishanta (3), Van Wyk Braam (4)</p> <p>1 - North-West University (South Africa), 2 - University of the Free State (South Africa), 3 - California Polytechnic State University (United States), 4 - University of Pretoria (South Africa)</p>
p.159	<p>Phylogeny and phytogeography of edaphic specialists in the Nyctaginaceae of southern Africa</p> <p>Struwig Madeleen (1), Siebert Stefan (2), Pienaar Magdil (3), Jackson Mariette (3), Barnard Sandra (2), Cilliers Dirk (4)</p> <p>1 - University of the Free State (South Africa), 2 - North-West University (South Africa), 3 - University of the Free State (South Africa), 4 - North-West University (South Africa)</p>
p.160	<p>Biological crusts of ultramafic and non-ultramafic soils from the Barberton Greenstone Belt of South Africa</p> <p>Siebert Stefan (1)</p> <p>1 - Unit for Environmental Sciences and Management, North-West University-Potchefstroom (South Africa)</p>

Session 8: Agromining	
p.173	<p>Is annual or perennial crop harvesting more efficient in phytoremediation?</p> <p>Adamidis George (1), Aloupi Maria (1), Mastoras Petros (1), Papadaki Maria-Ioanna (1), Dimitrakopoulos Panayiotis (1)</p> <p>1 - University of the Aegean (Greece)</p>
p.174	<p>Thinking agromining in terms of optimisation of ecosystem services</p> <p>Navarrete Gutierrez Dulce Montserrat (1), Echevarria Guillaume (2), Pons Marie-Noëlle (3)</p> <p>1 - Laboratoire Sols et Environnement (France), 2 - Laboratoire Sols et Environnement (France), 3 - Laboratoire Réactions et Génie des Procédés (CNRS-UL UMR 7274) (France)</p>
p.175	<p>Integrating agromining in the cropping systems of farmers from the Pogradec region, Albania</p> <p>Navarrete Gutiérrez Dulce Montserrat (1)</p> <p>1 - Laboratoire Sols et Environnement (France)</p>
p.176	<p>Improving Ni-agromining with Mediterranean hyperaccumulators: the role of fertilisation and co-cropping with legumes</p> <p>Quintela-Sabaris Celestino (1), (2), Gonzalez-Prieto Serafin, Saad Ramez, Benizri Emile, Philippot Laurent, Kidd Petra</p> <p>1 - Department of Soil Biochemistry (Spain), 2 - Laboratoire Sols et Environnement (France)</p>
p.177	<p>Can fungal endophytes be used to improve <i>Thlaspi</i> growth in ultramafic soils?</p> <p>Rozpadek Piotr (1), Janicka Martyna (1), Jedrzejczyk Roman (1), Wazny Rafal (1), Domka Agnieszka (2), Turnau Katarzyna (2)</p> <p>1 - Małopolska Centre of Biotechnology, Jagiellonian University (Poland), 2 - Institute of Environmental Sciences, Jagiellonian University (Poland)</p>
p.178	<p>Changes in soil physicochemical characteristics and root architecture of <i>Alyssum murale</i> cropped with a legume on a serpentine soil</p> <p>Saad Ramez (1) (2)</p> <p>1 - Université Libanaise (Lebanon), 2 - Laboratoire Sols et Environnement (France)</p>

p.179	Endophytic fungal mycobiota in hyperaccumulating Thlaspi
	Wazny Rafal (1), Rozpadek Piotr, Jedrzejczyk Roman, Janicka Martyna, Domka Agnieszka, Lichtsheidl Irene, Turnau Katarzyna
	1 - Malopolska Centre of Biotechnology, Jagiellonian University (Poland)

Session 9: Ultramafic aquatic chemistry, ecology and ecotoxicology	
p.187	Assessment of Heavy Metals Pollution in Water and Sediments of Drini Bardhe River, Kosovo
	Alikaj Marsela (1), Haxhibeqiri Burim (1), Brahusi Ferdi (1) 1 - 1Department of Agroenvironment and Ecology, Agricultural University of Tirana, Tirana, Albania. (Albania)
p.188	Heavy metal accumulation in sediment, water and plants in the Albanian part of Lake Ohrid
	Dalo Enis (1), Sadikaj Rigerta (2), Sahiti Hazbije (1) 1 - University of Prishtina Faculty of Mathematical and Natural Science (Albania), 2 - University of Tirana Faculty of Natural Science (Albania)
p.189	Heavy metals in water, sediments and plants in the Shkodra Lake
	Demiraj Erdona (1), Malltezi Jamarber (2), Sulce Sulejman (2) 1 - PhD Student Department of Agro environment and Ecology, AUT, Albania (Albania), 2 - Department of Agro environment and Ecology, AUT, Albania (Albania)
p.190	Trace metal bioaccumulation in aquatic plants and epiphytic algae from Lake Ohrid (Albania)
	Gross Elisabeth (1), Minguez Laetitia (1), Imeri Alma (2), Bani Aida (3), Vignati Davide (1), Wagner Philippe, Rousselle Philippe (1), Pain-Devin Sandrine (1), Devin Simon (1), Guerold François (1), Giamberini Laure (1) 1 - Laboratoire Interdisciplinaire des Environnements Continentaux (France), 2 - Department of Plant Production, Faculty of Agriculture and Environment, Agricultural University of Tirana (Albania), 3 - Agro-Environmental Department, Faculty of Agriculture and Environment, Agricultural University of Tirana (Albania)
p.191	Natural background values for heavy metals in the sediments of Karavasta Lagoon-Albania
	Koto Romina (1), Bani Aida (1) 1 - Environmental Department, Faculty of Agronomy and Environment, Agricultural University of Tirana, (Albania)