A global initiative to understand gypsum ecosystem ecology

Résultats

Informations projet

GYPWORLD

N° de convention de subvention: 777803

Site Web du projet

DOI
10.3030/777803

Projet clôturé

Date de signature de la CE
21 Novembre 2017

Date de début
1 Janvier 2018

Date de fin
31 Octobre 2023

Financé au titre de
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Coût total
€ 747 000,00

Contribution de l'UE
€ 724 500,00

Coordonné par
AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS
Spain

CORDIS fournit des liens vers les livrables publics et les publications des projets HORIZON.

Les liens vers les livrables et les publications des projets du 7e PC, ainsi que les liens vers certains types de résultats spécifiques tels que les jeux de données et les logiciels, sont récupérés dynamiquement sur OpenAIRE.

Livrables

Websites, patent fillings, videos etc. (1)

Project website
Website to showcase the project and its participants actions and main results

Documents, reports (3)

Descriptive manuscript on gypsum plant communities and vegetation worldwide
Manuscript describing the main characteristics of gypsum plant communities and vegetation in the different regions of the world analyzed in the project

Check-list manuscript of world gypsum plants
First checklist manuscript of world gypsum plants summarizing the species found in the different gypsum areas and their putative specificity to gypsum soils

Handbook of best practices on gypsum ecosystem restoration
Document summarizing the best practices to restore gypsum ecosystems after degradation by mining or other human actions

Other (2)

Database on available sequences from the literature and GenBank
Database including all available DNA sequences from the literature and GenBank for the gypsum lineages included in WP2.

GYPWORLD DNA sequences and phylogenetic trees databases
Databases containing DNA sequences of all species included in WP2 of the study (deposited in GenBank) and the phylogenetic trees obtained for the main gypsum lineages included in WP2 (deposited in TreeBASE).

Publications

Peer reviewed articles (32)

When disturbances favour species adapted to stressful soils: grazing may benefit soil specialists in gypsum plant communities

Auteurs: Cera, Andreu; Montserrat-Martí, Gabriel; Luzuriaga, Arantzazu L.; Pueyo, Yolanda; Palacio, Sara
Publié dans: Peer J, Numéro 10, 2022, Page(s) e14222, ISSN 2167-8359
Éditeur: PeerJ
DOI: 10.7717/peerj.14222

Rainy years counteract negative effects of drought on taxonomic, functional and phylogenetic diversity: Resilience in annual plant communities
Auteurs: Roberto López Rubio; Adrián Escudero; Ana M. Sánchez; David S. Pescador
Publié dans: Journal of Ecology, Numéro 110, 2022, ISSN 0022-0477
Éditeur: Blackwell Publishing Inc.
DOI: 10.1111/1365-2745.13948

Changes in rainfall amount and seasonality modulate taxonomic, functional, and phylogenetic diversity in a gypsophilous plant community in the Chihuahuan Desert
Auteurs: Vargas-Colin, A; Flores, J; Romo-Campos, R; Douterlungne, D; Yáñez-Espinosa, L; González, J.M.; Luzuriaga, Arantzazu L.
Publié dans: Plant Ecology and Diversity, Numéro 15 (5-6), 2022, ISSN 1755-0874
Éditeur: Taylor & Francis
DOI: 10.1080/17550874.2022.2130017

Climate change and biocrust disturbance synergistically decreased taxonomic, functional, and phylogenetic diversity in annual communities on gypsiferous soils
Auteurs: Sánchez, A.M.; Peralta, Ana M.L.; Luzuriaga, Arantzazu L.; Prieto, María; Escudero, Adrián
Publié dans: Oikos, Numéro 2022, 2022, ISSN 0030-1299
Éditeur: Blackwell Publishing Inc.
DOI: 10.1111/oik.08809

Recent and ancient evolutionary events shaped plant elemental composition of edaphic endemics: a phylogeny-wide analysis of Iberian gypsum plants
Auteurs: Sara Palacio; Andreu Cera; Adrián Escudero; Arantzazu L. Luzuriaga; Ana M. Sánchez; Juan Francisco Mota; María Pérez-Serrano Serrano; M. Encarnación Merlo; Fabián Martínez-Hernández; Esteban Salmerón-Sánchez; Antonio Jesús Mendoza-Fernández; Francisco J. Pérez-García; Gabriel Montserrat-Martí; Pablo Tejero
Publié dans: New Phytologist, Numéro 235, 2022, ISSN 0028-646X
Éditeur: Blackwell Publishing Inc.
DOI: 10.1111/nph.18309

Artemisia sieberi dominated landscapes of Northeastern Iran host great diversity in lichen and annual plant species

Auteurs: Ahmadian, N.; Abedi, M.; Escudero, A.; Sohrabi, M; Luzuriaga, Arantzazu L.
Publié dans: Flora, Numéro Vol. 288, 2022, ISSN 0367-2530
Éditeur: Elsevier BV
DOI: 10.1016/j.flora.2022.152019

Ecohydrological niche segregation among desert shrubs in a gypsum-calcareous formation, north-western Iran
Auteurs: Rudov, Alexander; De la Puente, Laura; Palacio, Sara; Sharifi, Arash; Querejeta, José I.; Ferrio, Juan Pedro; Rahmaninia, Hossein; Akhani, Hossein
Publié dans: Plant Ecology & Diversity, Numéro 16:1-2, 2023, Page(s) 61-75, ISSN 1755-0874
Éditeur: Taylor & Francis
DOI: 10.1080/17550874.2023.2255985

Calcium sulphate biomineralisation: Artefact of sample preparation?
Auteurs: Andreu Cera; Cristóbal Verdugo-Escamilla; Juan A. Marín; Sara Palacio
Publié dans: Physiologia Plantarum, Numéro 175 (5), 2023, ISSN 0031-9317
Éditeur: Blackwell Publishing Inc.
DOI: 10.1111/ppl.14017

Homogeneous microenvironmental conditions under nurses promote facilitation
Auteurs: Sánchez-Martín, Ricardo; Montesinos-Navarro, Alicia; Ochoterena, Helga; Pisanty, Irene; Rodríguez-Sánchez, Mariana; Verdú, Miguel; Flores-Olvera, Hilda
Publié dans: Functional Ecology, 2023, ISSN 0269-8463
Éditeur: Blackwell Publishing Inc.
DOI: 10.1111/1365-2435.14486

Typification and an emended description of Astragalus moussavii (Fabaceae, Papilionoideae)
Auteurs: Ghahremaninejad, F; Nejad-Falatoury, A; Memariani, F.
Publié dans: Phytotaxa, Numéro 441(1), 2020, Page(s) 60-68, ISSN 1179-3155
Éditeur: Magnolia Press
DOI: 10.11646/phytotaxa.441.1.5

Nutritional strategies underlying plant specialization to gypsum soils
Auteurs: Cera, Andreu; Montserrat-Martí, Gabriel; Palacio, Sara
Publié dans: AoB Plants, Numéro 15(4), 2023, Page(s) plad041, ISSN 2041-2851
Éditeur: Oxford Academic
DOI: 10.1093/aobpla/plad041

Smartphone-based tension disc infiltrometer for soil hydraulic characterisation

Auteurs: Borja Latorre; David Moret-Fernández; M.N. Lyons; S. Palacio
Publié dans: Journal of Hydrology, Numéro Volume 600, September 2021, 2021, ISSN 0022-1694
Éditeur: Elsevier BV
DOI: 10.1016/j.jhydrol.2021.126551

Diverse phylogenetic neighborhoods enhance community resistance to drought in experimental assemblages.
Auteurs: Rocío Chaves; Pablo Ferrandis; Adrián Escudero; Arantzazu L. Luzuriaga
Publié dans: Scientific Reports, Numéro Vol 11, Iss 1, 2021, 2021, Page(s) 22499, ISSN 2045-2322
Éditeur: Nature Publishing Group
DOI: 10.1038/s41598-021-01991-z

Do soil features condition seed germination of gypsophiles and gypsovags? An analysis of the effect of different natural soils along an alkalinity gradient
Auteurs: Heiden, Nathaniel; Cera, Andreu; Palacio, Sara
Publié dans: Journal of Arid Environments, Numéro 196, 2022, ISSN 0140-1963
Éditeur: Academic Press
DOI: 10.1016/j.jaridenv.2021.104638

Plant-soil interactions in response to grazing intensity in a semi-arid ecosystem from NE Spain
Auteurs: Manuel Navarro-Perea; Yolanda Pueyo; David Moret; Ángel Valverde; José Mariano Igual; Concepción L. Alados
Publié dans: Arid Land Research and Management, Numéro 37:2, 2023, ISSN 1532-4982
Éditeur: Taylor & Francis
DOI: 10.1080/15324982.2022.2119901

Checklist of gypsophilous vascular flora in Italy
Auteurs: Carmelo Maria Musarella, Antonio Jesús Mendoza-Fernández, Juan Francisco Mota, Alessandro Alessandrini, Gianluigi Bacchetta, Salvatore Brullo, Orazio Caldarella, Giampiero Ciaschetti, Fabio Conti, Luciano Di Martino, Amedeo Falci, Lorenzo Gianguzzi, Riccardo Guarino, Aurelio Manzi, Pietro Minissale, Sergio Montanari, Salvatore Pasta, Lorenzo Peruzzi, Lina Podda, Saverio Sciandrello, Leonardo Scu
Publié dans: PhytoKeys, Numéro 103, 2018, Page(s) 61-82, ISSN 1314-2011
Éditeur: Pensoft Publishers
DOI: 10.3897/phytokeys.103.25690

Spectral Response Analysis: An Indirect and Non-Destructive Methodology for the Chlorophyll Quantification of Biocrusts

Auteurs: José Raúl Román, Emilio Rodríguez-Caballero, Borja Rodríguez-Lozano, Beatriz Roncero-Ramos, Sonia Chamizo, Pilar Águila-Carricondo, Yolanda Cantón
Publié dans: Remote Sensing, Numéro 11/11, 2019, Page(s) 1350, ISSN 2072-4292
Éditeur: Multidisciplinary Digital Publishing Institute (MDPI)
DOI: 10.3390/rs11111350

The elemental composition of halophytes correlates with key morphological adaptations and taxonomic groups
Auteurs: Zeinab Matinzadeh, Hossein Akhani, Mehdi Abedi, Sara Palacio
Publié dans: Plant Physiology and Biochemistry, Numéro 141, 2019, Page(s) 259-278, ISSN 0981-9428
Éditeur: Elsevier BV
DOI: 10.1016/j.plaphy.2019.05.023

Evidence of functional species sorting by rainfall and biotic interactions: A community monolith experimental approach
Auteurs: Ana M. L. Peralta, Ana M. Sánchez, Arantzazu L. Luzuriaga, Francesco Bello, Adrián Escudero
Publié dans: Journal of Ecology, Numéro 107/6, 2019, Page(s) 2772-2788, ISSN 0022-0477
Éditeur: Blackwell Publishing Inc.
DOI: 10.1111/1365-2745.13210

Unassisted establishment of biological soil crusts on dryland road slopes
Auteurs: Laura Concostrina-Zubiri, Juan M. Arenas, Isabel Martínez, Adrián Escudero
Publié dans: Web Ecology, Numéro 19/1, 2019, Page(s) 39-51, ISSN 1399-1183
Éditeur: Blackwell Publishing Inc.
DOI: 10.5194/we-19-39-2019

Plant functional structure along salinity gradients in Iranian salt marshes
Auteurs: Matinzadeh, Zeinab; López-Angulo, Jesús; Escudero, Adrián; Palacio, Sara; Abedi, Mehdi; Akhani, Hossein
Publié dans: Plant-Environment Interactions, Numéro Vol. 3, 2022, Page(s) 16–27, ISSN 2575-6265
Éditeur: Wiley
DOI: 10.1002/pei3.10070

Spontaneous Primary Succession and Vascular Plant Recovery in the Iberian Gypsum Quarries: Insights for Ecological Restoration in an EU Priority Habitat

Auteurs: Juan Francisco Mota; Fabián Martínez-Hernández; Esteban Salmerón-Sánchez; Antonio Jesús Mendoza-Fernández; Francisco Javier Pérez-García; M. Encarna Merlo
Publié dans: Plants, Numéro 2023, 12, 2023, Page(s) 1162, ISSN 2223-7747
Éditeur: MPDI
DOI: 10.3390/plants12051162

Functional traits explain both seedling and adult plant spatial patterns in gypsum annual species
Auteurs: Peralta, Ana L.; Escudero, Adrián; De la Cruz, Marcelino; Sánchez, Ana M.; Luzuriaga, Arantzazu L.
Publié dans: Functional Ecology, Numéro 37, 2023, Page(s) 1170–1180, ISSN 0269-8463
Éditeur: Blackwell Publishing Inc.
DOI: 10.1111/1365-2435.14304

Phylogeography of a gypsum endemic plant across its entire distribution range in the western Mediterranean.
Auteurs: Mario Blanco-Sánchez; Michael J. Moore; Marina Ramos-Muñoz; Beatriz Pías; Alfredo García-Fernández; María Prieto; Lidia Plaza; Ignacio Isabel; Adrián Escudero; Silvia Matesanz
Publié dans: American Journal of Botany, Numéro 2021 Mar;108(3), 2021, ISSN 0002-9122
Éditeur: Botanical Society of America, Inc.
DOI: 10.1002/ajb2.1625

Effect of aridity on species assembly in gypsum drylands: a response mediated by the soil affinity of species
Auteurs: Luzuriaga, Arantzazu L., Ferrandis, Pablo, Flores, Joel, Escudero, Adrián
Publié dans: AoB PLANTS, Numéro Volume 12, Numéro 3, June 2020, plaa020, 2020, ISSN 2041-2851
Éditeur: Oxford University Press
DOI: 10.1093/aobpla/plaa020

Seasonal variation in AMF colonisation, soil and plant nutrient content in gypsum specialist and generalist species growing in P-poor soils
Auteurs: Andreu Cera; Andreu Cera; Estephania Duplat; Gabriel Montserrat-Martí; Antonio Gómez-Bolea; Susana Rodríguez-Echeverría; Sara Palacio
Publié dans: Plant and Soil, Numéro Volume 468, 2021, ISSN 0032-079X
Éditeur: Kluwer Academic Publishers
DOI: 10.1007/s11104-021-05140-3

Bryophyte diversity in the gypsum outcrops of Sicily (Italy)

Auteurs: Puglisi, Marta; Campisi, Patrizia; Privitera, Maria; Spampinato, Giovanni
Publié dans: Nova Hedwigia, Numéro Vol. 111 (2020), Numéro 3 -4, 2020, Page(s) 337– 355, ISSN 0029-5035
Éditeur: J Cramer in der Gebruedr Borntreeger Verlagsbuchhandlung
DOI: 10.1127/nova_hedwigia/2020/0602

Disentangling water sources in a gypsum plant community. Gypsum crystallization water is a key source of water for shallow-rooted plants
Auteurs: Dela Puente, Laura; Ferrio, Juan Pedro; Palacio, Sara
Publié dans: Annals of Botany, Numéro mcab107, 2022, ISSN 0305-7364
Éditeur: Oxford University Press
DOI: 10.1093/aob/mcab107

GYPWORLD Africa: Setting an agenda for gypsum ecosystem research in southern Africa
Auteurs: Siebert, Stefan J.; Palacio, S.; Luzuriaga, Arantzazu L.; Maggs-Kölling, Gillian; Marais, Eugene; Matesanz, Silvia; Prieto, Maria; Pueyo, Yolanda; Rajakaruna, Nishanta; Sánchez, Ana M.; Claassens, Sarina
Publié dans: South African Journal of Botany, Numéro 119(9/10), 2023, Page(s) "Art. #15308", ISSN 0254-6299
Éditeur: National Inquiry Services Centre Ltd.
DOI: 10.17159/sajs.2023/15308

Plant affinity to extreme soils and foliar sulphur mediate species-specific responses to sheep grazing in gypsum systems
Auteurs: Cera, Andreu; Montserrat-Martí, Gabriel; Luzuriaga, Arantzazu L.; Pueyo, Yolanda; Palacio, Sara
Publié dans: Plant Ecology and Diversity, Numéro 15:5-6, 2023, Page(s) 253-263, ISSN 1755-0874
Éditeur: Taylor & Francis
DOI: 10.1080/17550874.2022.2155079

Gypsum-exclusive plants accumulate more leaf S than non-exclusive species both in and off gypsum
Auteurs: Andreu Cera; Andreu Cera; Gabriel Montserrat-Martí; Juan Pedro Ferrio; Rebecca E. Drenovsky; Sara Palacio
Publié dans: Environmental and Experimental Botany, Numéro Vol. 182, Feb 2021, 2021, ISSN 0098-8472
Éditeur: Elsevier BV
DOI: 10.1016/j.envexpbot.2020.104294

Gypsum endemics accumulate excess nutrients in leaves as a potential constitutive strategy to grow in grazed extreme soils

Auteurs: Cera, Andreu; Montserrat-Martí, Gabriel; Drenovsky, Rebecca E.; Ourry, Alain; Brunel-Muguet, Sophie; Palacio, Sara
Publié dans: Physiologia Plantarum, Numéro 174(4), 2022, Page(s) e13738, ISSN 0031-9317
Éditeur: Blackwell Publishing Inc.
DOI: 10.1111/ppl.13738

Other (1)

GYPWORLD Conference and workshop presentations
Auteurs: Conference and workshop key speakers and presenters
Publié dans: 2020
Éditeur: GYPWORLD Consortium

Monographic books (1)

GYPWORLD: A Global initiative to understand gypsum ecosystem ecology. Book of abstracts and modelling course guide
Auteurs: Mota, Juan Francisco; Salmerón-Sánchez, Esteban; Merlo, Encarna
Publié dans: 2022, ISBN 978-84-1351-174-0
Éditeur: EDUAL-Editorial Universidad de Almería
DOI: 10.5281/zenodo.10396788

Ensemble de données

Ensemble de données via OpenAIRE (3)

Dataset of Rainy years counteract negative effects of drought on taxonomic, functional, and phylogenetic diversity: resilience in annual plant communities
Auteurs: López-Rubio, Roberto; Pescador, David S.; Escudero, Adrián; Sánchez, Ana M.
Publié dans: Zenodo

Supplementary material 2 from: Musarella CM, Mendoza-Fernández AJ, Mota JF, Alessandrini A, Bacchetta G, Brullo S, Caldarella O, Ciaschetti G, Conti F, Martino L, Falci A, Gianguzzi L, Guarino R, Manzi A, Minissale P, Montanari S, Pasta S, Peruzzi L, Podda l, Sciandrello S, Scuderi L, Troia A,

Spampinato G (2018) Checklist of gypsophilous vascular flora in Italy. PhytoKeys 103: 61-82. https://doi.org/10.3897/phytokeys.103.25690

Auteurs: Musarella, Carmelo Maria; Mendoza-Fernández, Antonio Jesús; Mota, Juan Francisco; Alessandrini, Alessandro; Bacchetta, Gianluigi; Brullo, Salvatore; Caldarella, Orazio; Ciaschetti, Giampiero; Conti, Fabio; Di Martino, Luciano; Falci, Amedeo; Gianguzzi, Lorenzo; Guarino, Riccardo; Manzi, Aurelio; Minissale, Pietro; Montanari, Sergio; Pasta, Salvatore; Peruzzi, Lorenzo; Podda, Lina; Sciandrello, Saverio; Scuderi, Leonardo; Troia, Angelo; Spampinato, Giovanni
Publié dans: Zenodo

Supplementary material 1 from: Musarella CM, Mendoza-Fernández AJ, Mota JF, Alessandrini A, Bacchetta G, Brullo S, Caldarella O, Ciaschetti G, Conti F, Martino L, Falci A, Gianguzzi L, Guarino R, Manzi A, Minissale P, Montanari S, Pasta S, Peruzzi L, Podda l, Sciandrello S, Scuderi L, Troia A, Spampinato G (2018) Checklist of gypsophilous vascular flora in Italy. PhytoKeys 103: 61-82. https://doi.org/10.3897/phytokeys.103.25690

Auteurs: Musarella, Carmelo Maria; Mendoza-Fernández, Antonio Jesús; Mota, Juan Francisco; Alessandrini, Alessandro; Bacchetta, Gianluigi; Brullo, Salvatore; Caldarella, Orazio; Ciaschetti, Giampiero; Conti, Fabio; Di Martino, Luciano; Falci, Amedeo; Gianguzzi, Lorenzo; Guarino, Riccardo; Manzi, Aurelio; Minissale, Pietro; Montanari, Sergio; Pasta, Salvatore; Peruzzi, Lorenzo; Podda, Lina; Sciandrello, Saverio; Scuderi, Leonardo; Troia, Angelo; Spampinato, Giovanni
Publié dans: Zenodo

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