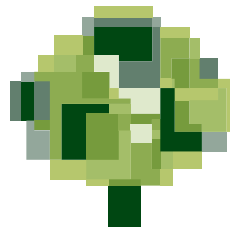


CREAF

Research, Innovation and
Knowledge Transfer in Terrestrial Ecology

ANNUAL REPORT 2017



CREAF

Research, Innovation and
Knowledge Transfer in Terrestrial Ecology

ANNUAL REPORT 2017

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A woman with dark hair, wearing a red and pink long-sleeved shirt and blue jeans, is leaning over to measure a tree trunk with a yellow measuring tape. She is holding a clipboard with a white sheet of paper. The background shows a field of green grass and several trees, suggesting a natural or research setting.

WHO WE ARE

OUR APPROACH

We are a public research center dedicated to terrestrial ecology, territorial analysis and global change, pursuing excellence in the generation and transfer of knowledge, management tools and methodologies.

We strive to create new knowledge and innovative solutions on terrestrial ecology management and land-atmosphere interaction that helps society to mitigate Global Change effects, creating adaptation plans and boosting the resilience of nature.

“Through excellence in science we aim to be a Mediterranean and world-class research institution that pushes the frontiers of knowledge while addressing some of the biggest and more complex environmental challenges society faces this century.”

Our aims

- Carry out innovative BASIC RESEARCH on ecology
- Promote APPLIED RESEARCH for the sustainable management of ecosystems
- Develop TOOLS to facilitate decision-making and environmental policies
- DISSEMINATE the science in ecology and its impact to society

Governing organizations

CREAF is a public research center which exists as a consortium between different public entities (administrations, universities, and research centers and institutes).

About us

- Founded in 1988
- A leading research center in Mediterranean ecosystems research
- Close to 120 scientists and experts grouped in four research areas: biodiversity, global change, forest ecology and territorial analysis.
- CREAM headquarters are located at the campus of the Autonomous University of Barcelona, Spain.
- An independent center for governments, NGOs, scientists, business and local communities to find practical solutions for facing global change in the Mediterranean region
- 60 research projects with field studies and activities around the planet.
- Funded by governments, international and national research programs, private companies and foundations.
- Governed by a board of trustees formed by different public entities (administrations, universities, and research centers and institutes).

Generalitat de Catalunya

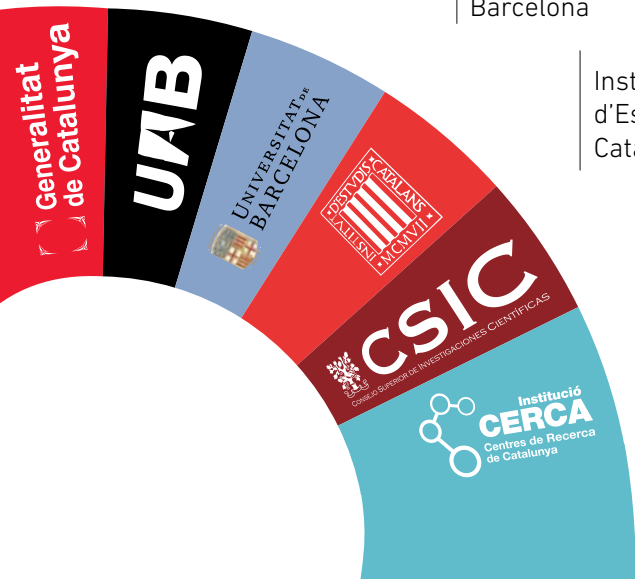
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The Board of Directors is named by the Board of Trustees and handles day-to-day issues of the Center. It is presided by the Director of CREAF and the Secretary is the Deputy Director of CREAF.

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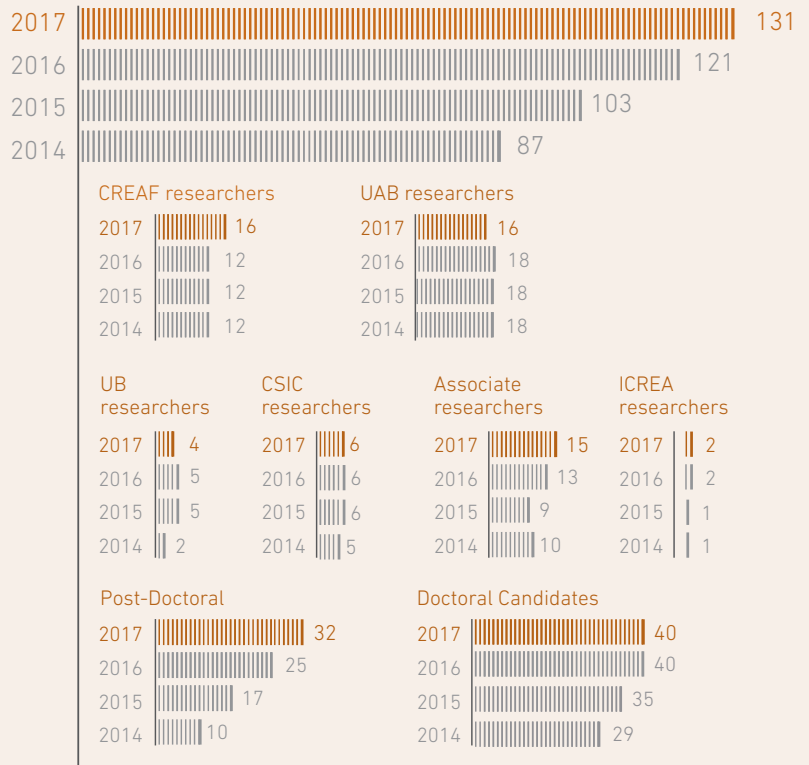
1. Pilar Andrés Pastor, PhD
2. Xavier Arnan Viadiu, PhD
3. Anna Àvila Castells, PhD
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5. Enrique Doblás Miranda, PhD
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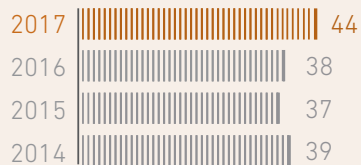
1. Josep M Alcañiz Baldellou, PhD
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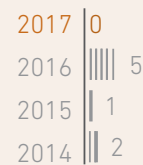
Researchers



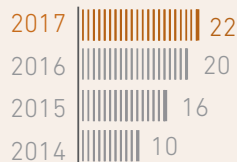
Technicians



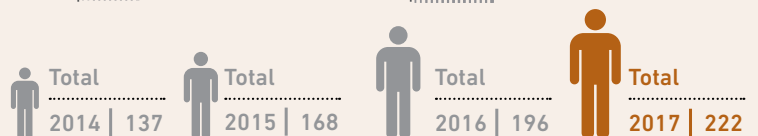
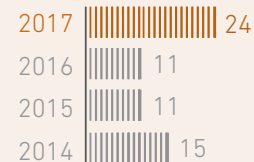
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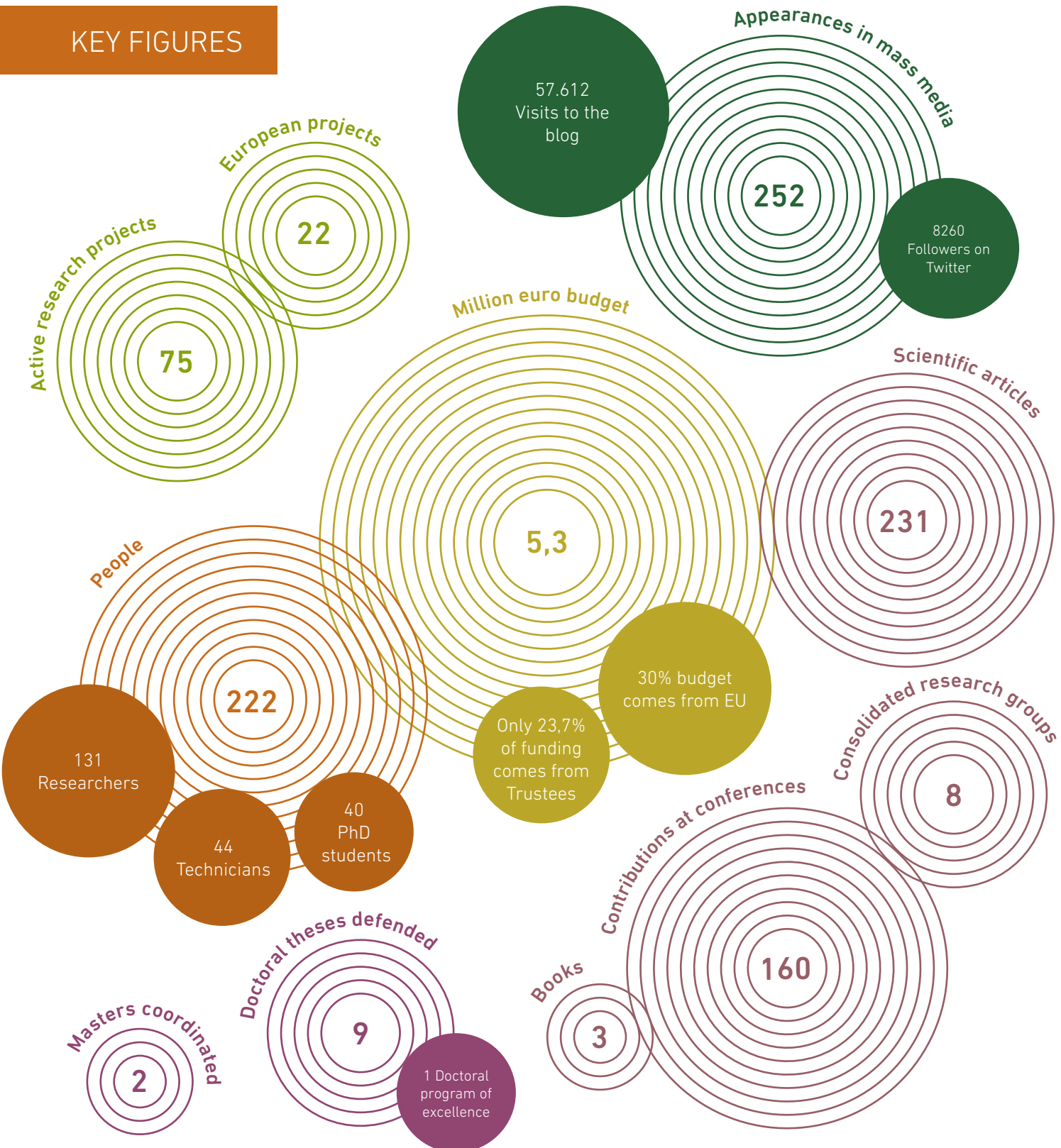
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Julie Messier	Université de Sherbrooke Canada
Paula Montagnana	Universidade do Sao Paulo Brasil
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Nicolas Raab	University of Oxford
Neus Rodríguez	IRTA
Carolina Rojas	Universidad de Concepción Chile
Asunción Saldaña	Universidad de Alcalá de Henares
Bjarni D. Sigurdsson	Agricultural University of Iceland
Peter Wilfhart	University of Bayreuth
Amy Zanne	George Washington University USA

WITH FINALIZATION OF RELATION WITH CREAM DURING 2017

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Ander Achotegui Castells, David Agudé Vidal, Adrià Barbeta Margarit, Chao-Ting Chang, Guillem Closa Santos, Gerard Farré Armengol, Irene Figueroa Aguilar, Elba Fuster Figuerola, Nancy Gamboa, Núria García Ferrer, Pau Giménez Grau, Pablo Igarza Briones, Clara Mir Massana.

KEY FIGURES





ANNUAL HIGHLIGHTS

CREAF STARTS AN ANNUAL PROGRAMME OF SEMINARS “CREAF TALKS”

It's a biweekly researcher forum, which offer an opportunity for researchers in ecology to present and discuss their work. Seminars showcase the global research work in the field of ecological science both within and beyond our centre.



MIRAMON IS NOW FREE TO THE INTERNATIONAL EDUCATION COMMUNITY

After 23 years of constant evolution and improvements, MiraMon aims to take another step forward and become an international leader in its sector. Becoming free for the education community worldwide, MiraMon is among the first to offer free specific remote sensing software and is now included in the set of free online Geographic Information System (GIS) tools.



Satellite image



The panel of judges met at CREAM a few months ago.

JOSEP PEÑUELAS CHAIRED THE PANEL OF JUDGES OF “NATURE AWARDS FOR MENTORING 2017”

For the first time, Nature Awards for Mentoring took place in Spain. A panel of judges, chaired by Josep Peñuelas, recognized four scientists for their exemplary personal mentoring of other scientists. The winners are Lluís Torner, Margarita Salas, Carlos López-Otín and Carlos Belmonte.

CREAF RECEIVED THE UAB COLLECTIVE AWARD

The award is granted annually by UAB Friends Association and the ceremony took place in November 16 at the Casa Convalecencia, in Barcelona. Javier Retana, CREAM director, wanted to thank behalf of all the staff the recognition that this award represents for CREAM.



Javier Retana, CREAM director, was grateful to receive the award. Credit: UAB

INTERNATIONAL HIGHLIGHTS

CREAF IS POSITIONING ITSELF AS AN INFLUENT ACTOR IN DIFFERENT SCIENTIFIC GROUPS

Enrique Doblás is member of 'New Forest Practices and Tools for Adaptation and Mitigation of Climate Change', part of the EIP-AGRI Focus Group initiative. Bernat Claramunt is CREA representative in Euromontana, and the coordinator of the Network for European Mountain Research (NEMOR). And Joan Pino is member of the management board of ALTER-Net network, an organization with representation from 18 leading European centers in biodiversity and ecosystem services.

Joan Masó is chair of the Citizen Science and Crowdsourcing community activity in GEO. Lluís Pesquer is member of the core group of the Water & ICT working group on the WssTP, the European Technology Platform in the Water domain.



UN AND MOSQUITO ALERT PROMOTE AN ALLIANCE TO STOP MOSQUITOES TRANSMITTING DISEASES THROUGH CITIZEN PARTICIPATION

A new alliance of citizen-science organisations and UN Environment was launched in an effort to escalate the global fight against mosquito-borne diseases, responsible for killing close to 2.7 million people annually, mostly in Africa and Latin America.



Participants of the meeting at United Nations in Geneva. Frederic Bartumeus, John Palmer and Roger Eritja assisted as members of Mosquito Alert.

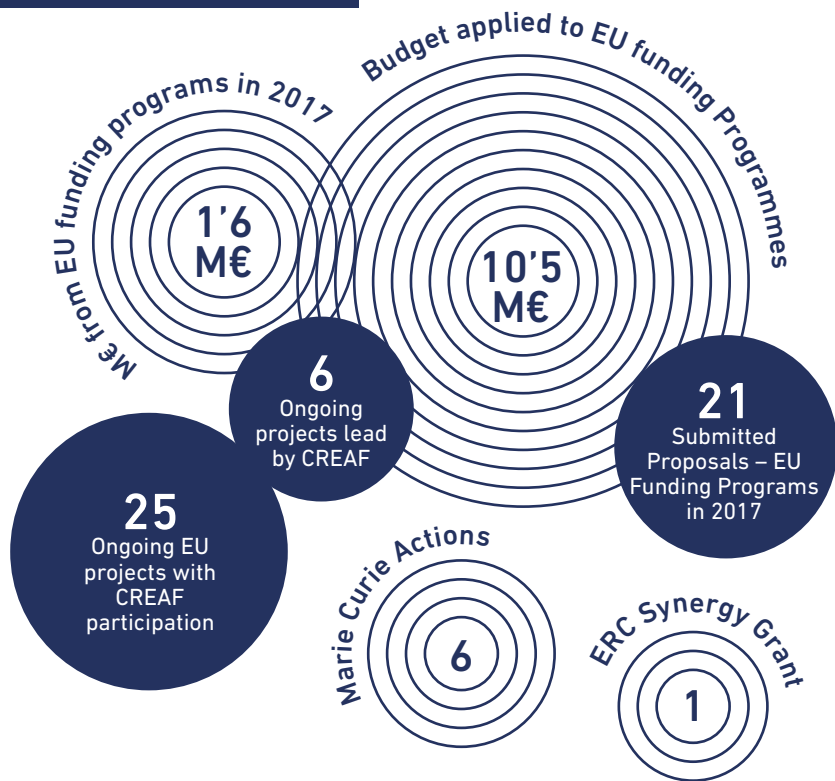
CREAF PARTICIPATES IN THE GEO WEEK GLOBAL INITIATIVE IN WASHINGTON DC

At the annual meeting of GEO (Group on Earth Observations), CREAM has organized two sessions: one that talked about citizen science, and another which explored the future perspectives for EuroGEOSS.



Informative stand in the GEOweek. Credit: Joan Masó.

KEY FIGURES



Submitted proposals in 2017

HORIZON 2020

- 2 Coordination and Support Action
- 1 ERC Advanced Grant
- 1 ERC Starting Grant
- 2 Innovation Action
- 1 Marie Curie COFUND
- 2 Marie Curie IF-EF-RI
- 2 Marie Curie ITN
- 7 Research and Innovation Action

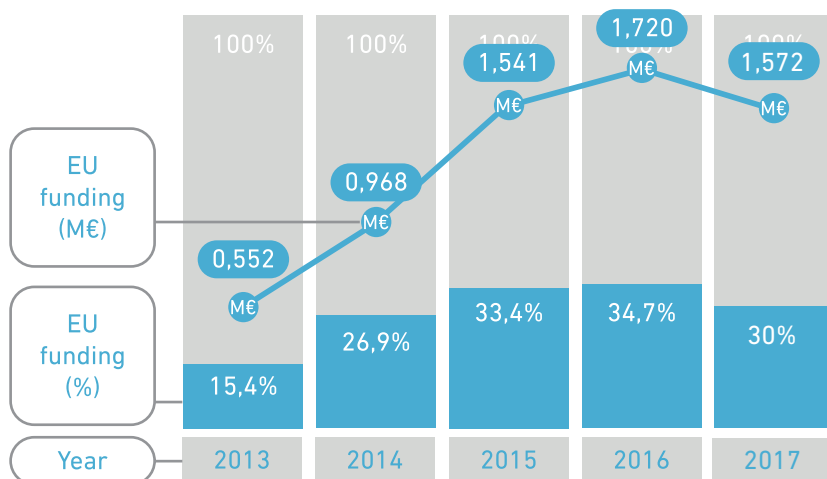
INTERREG

- 1 MEDITERRANEAN
- 2 SUDOE

LIFE

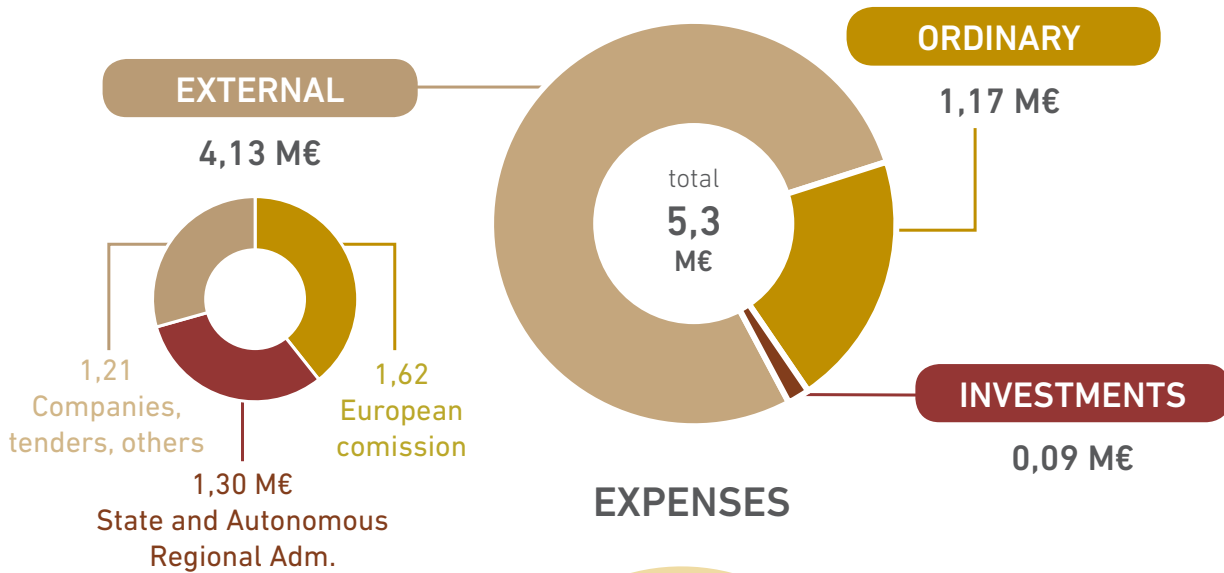
- 1 Climate Change Adaptation
- 1 LIFE Nature & Biodiversity

Total EU funding and % of EU funding related to the total incomes per year

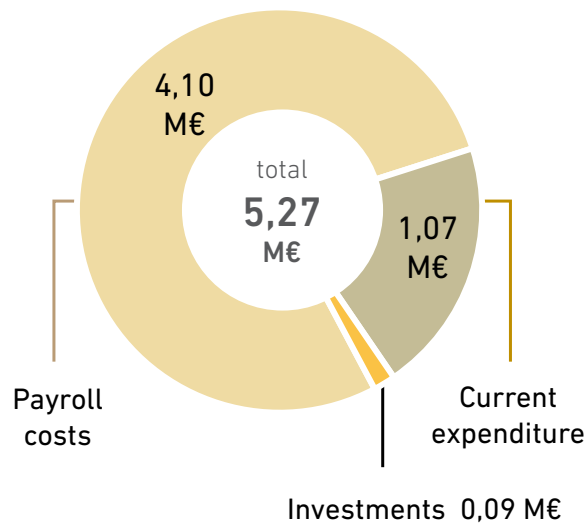


FINANCIAL OVERVIEW

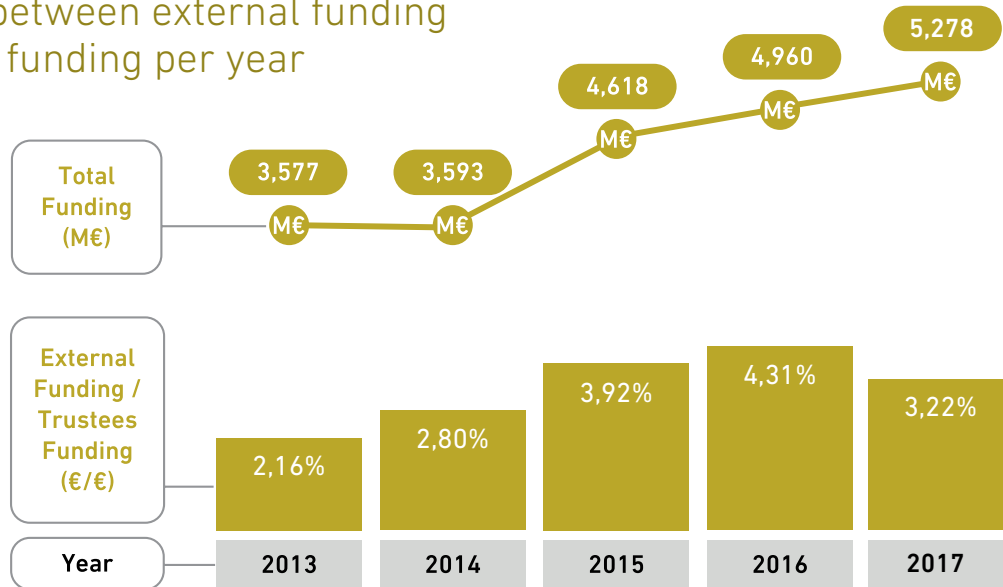
REVENUE



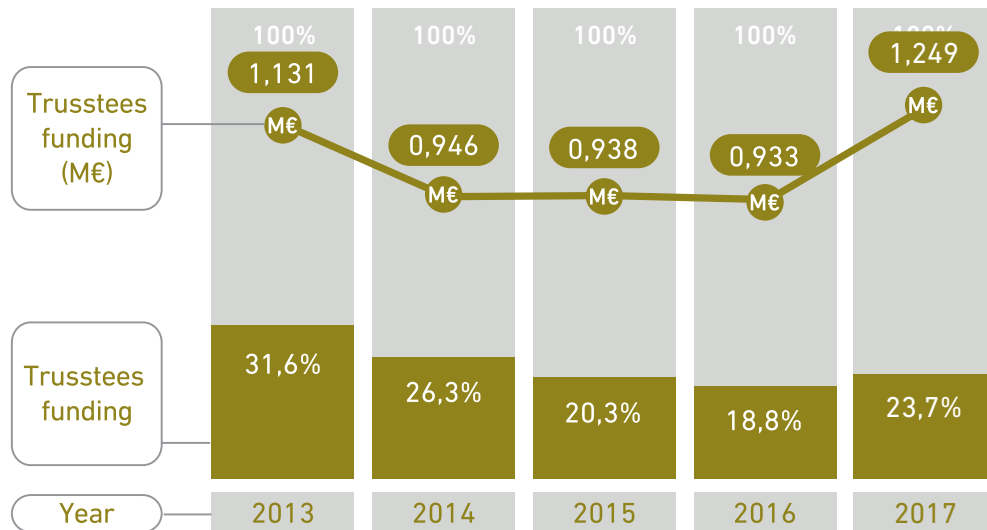
EXPENSES



Total CREAM's funding and relationship between external funding and Trustees funding per year



Total contribution of Trustees to CREAM's budget and % of Trustees funding related to the total incomes per year

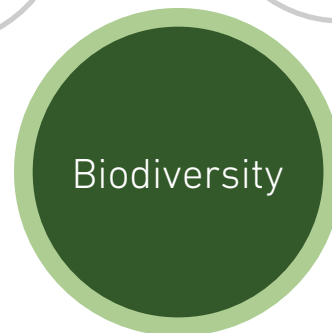
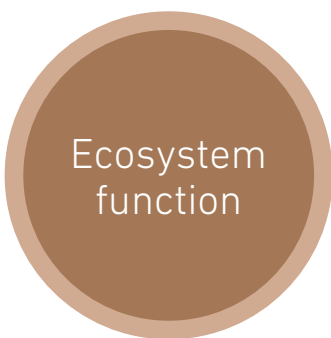


A vibrant red mushroom with white spots and a white stem growing in a forest floor covered with dry leaves and twigs. The mushroom is the central focus, with its bright red cap and white stem standing out against the dark, textured background of forest debris. The lighting is natural, highlighting the texture of the mushroom's cap and the surrounding environment.

RESEARCH
HIGHLIGHTS

Our research has a global impact.

We have a broad and multidisciplinary research portfolio, integrating fundamental research advances with important contributions in environmental issues of great socioeconomic impact. Our research focuses on four big areas and six cross-cutting topics.





Biodiversity

The Mediterranean Basin is one of the principal points of biodiversity concentration on the planet. The loss of this biodiversity is one of the greatest environmental challenges which we have been obliged to face in the past few decades. Without biodiversity, it would be impossible to obtain the multitude of ecological goods and services which we need to live.

At CREAF we study the mechanisms which generate and maintain biodiversity in terrestrial ecosystems. We analyze territorial patterns of biodiversity and the factors which threaten it. We work with species and communities of plants and animals, with studies carried out from the molecular to ecosystem scale.

Research lines

- Behavior, ecology and evolution
- Population and community dynamics
- Evolutionary ecology
- Species distribution and phenology
- Ecological networks and species interactions

SCIENTIFIC ADVANCES

May 24th, 2017

Scant dwelling options cause the dormouse to raise a larger number of males

Some populations of the edible dormouse have become isolated due to destruction or severe alteration of their habitat. A study from Mariona Ferrándiz, published in *Animal Biology* by **CREAF** and the Granollers Natural Science Museum shows, that litters from isolated groups have more males than females since the males are the more exploratory sex charged with finding new territories.



A dormouse is sleeping quietly in its nest
Credit: Lidia Freixas

May 31st, 2017

Cities threaten millions of years of bird evolution

A study led by **Daniel Sol** shows that cities preserve 450 million years less evolutionary history compared to natural environments. Birds capable of surviving in highly urbanized environments have undergone recent evolution. The arrival of exotic species does not compensate for poor urban evolutionary diversity explains the article published in the journal *Ecology Letters*.



A hoopoe (*Upupa epops*)
Credit: Daniel Sol

July 4th, 2017

Bee decline is a fact

CREAF ecologists **Jordi Bosch** and **Anselm Rodrigo** say that bee populations are on the decline and that pesticides such as neonicotinoids are one of the main causes. It is important to promote organic, sustainable agriculture and move forward on the prohibition of these compounds. The study has been published in ***Pest Management Science***.



The bumblebee *Xylocopa violácea* is a common pollinator in the Iberian Peninsula, also known as the carpenter bee because it excavates and makes nests in tree trunks. Credit: Sara Reverté

SCIENCE FOR ENVIRONMENTAL MANAGEMENT

March 24th, 2017

Wildfires can favor the diversity of flora and fauna

In many ecosystems, fire promotes a greater variety of species of plants and animals since it creates a more diverse set of environments. The positive effects of fire cannot be generalized to all aspects of an ecosystem; profound knowledge about the local species and fire regime is crucial. Insights from the study published in *Science* and lead by Lluís Brotons are useful for planning management of forest biomass fuel, controlled burnings, and forest fire suppression.



Controlled burning in Albacete, Spain
Credit: Carla Vilarasau/Pau Costa Foundation

HIGHLIGHTED BIODIVERSITY RESEARCH PROJECTS

DEMO

Demonstration of the management of a solitary bee to improve orchard pollination



Principal investigator:
Jordi Bosch and Anselm Rodrigo
Budget: 29961,15 €
Entity: Generalitat de Catalunya
Period: 2017-2018

PICAT

Integrated platform for the control of aboviruses in Catalonia



Principal investigator:
Fede Bartumeus
Budget: 443.657 €
Entity: Generalitat de Catalunya
Period: 2017-2019

SPAMCREUS

Proposal of catalog of the Cap de Creus National Park protected and endangered fauna and flora



Principal investigator:
Sandra Saura Mas
Budget: 11761,2 €
Entity: Generalitat de Catalunya
Period: 2017

TRANSFER

Keys to understanding the transfer of atmospheric fluctuations to the dynamics of lake plankton



Principal investigator:
Jordi Catalan
Budget: 166.980 €
Entity: Ministerio de Economía y Competitividad
Period: 2016-2019

SISEBIO

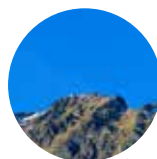
Catalonian program for comprehensive biodiversity monitoring



Principal investigator: Javier Retana
Budget: 45.000 €
Entity: Generalitat de Catalunya
Period: 2016-2017

WILDLIFE IN THE ANDORRAN PYRENEES

Long term survey of high elevation organisms and some of their interactions, to determine whether climate change and/or human pressure will lead to new communities.



Principal investigator:
Bernat Claramunt
Budget: 89.528 €
Entity: EarthWatch Institute
Period: 2016-2018

EXOCAT

Monitoring program of exotic species in Catalonia



Principal investigator: Joan Pino
Budget: 50.000 €
Entity: Generalitat de Catalunya
Period: 2010-2017

Check **Annexes** to see other research projects in Biodiversity Area

Global Change

Each organism, every community, and every ecosystem plays an important role in the regulation of cycles of energy and nutrients which keep the planet alive. Some of these roles have been modified due to atmospheric changes, climate change, increases in disturbances and changes in land use.

At CREAM we study the effects of **global change** (which includes all of the aforementioned changes) with an international and multidisciplinary focus. The methods of study require working at **diverse scales** (from the organism to the ecosystem), combining experimentation with modeling, and conducting **long-term** monitoring of different ecosystems.

Research lines:

- Biological invasions
- Land use change and landscape dynamics
- Climate change
- Fires
- Integrative and adaptive management of water and the territory
- Urbanization and biodiversity

SCIENTIFIC ADVANCES

June 9th, 2017

Achieving the COP21 agreements is currently far-fetched

The COP21 set the maximum temperature increase for 2100 at 1.5° C. **Josep Peñuelas** has participated in a study published in *Nature Communications* which explains that the only scenario which would allow achievement of this goal would require vastly reducing human CO₂ emissions, significantly increasing the prominence of renewable energies, and the use of some type of artificial carbon sequestration technology.



Carbon emissions from an electricity generation plant

November 6th, 2017

5 out of every 1,000 daily car trips in the Metropolitan Area of Barcelona during the summer carries a tiger mosquito

A team of scientists from the citizen science project **Mosquito Alert** has shown that unwitting transport of tiger mosquitos in private vehicles is a clear mechanism for their dispersal. The researchers inspected vehicles at random in checkpoints at tollbooths and vehicle inspection stations. Barcelona is the province which exports the most mosquitos to other Spanish provinces, as it has been reported in the article published in *Zenodo*.



Photos of tiger mosquitos inside the cars taken by citizen with the app.
Credit: Mosquito Alert

September 15th, 2017

Humans are causing mass movements of bacteria around the world

In an article in the journal **Science**, **Josep Peñuelas** warns that we must immediately begin studying the changes we are causing in the microbial world, improve water treatment systems, and change crop fertilization practices.

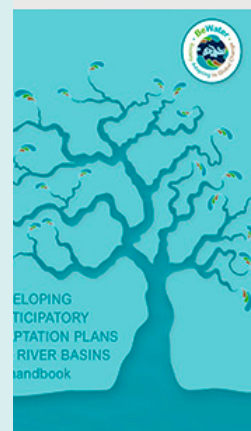


SCIENCE FOR ENVIRONMENTAL MANAGEMENT

June 28th, 2017

The BeWater publishes a guide about participatory management of river basins

The manual, in which the CREAM researchers **Anabel Sánchez** and **Annelies Broekman** have participated, summarizes the stages of the BeWater project and the lessons learned in the creation of adaptation plans between scientists and local society. The guide is translated into English, Catalan, French, Slovenian and Spanish.



Developing participatory adaptation plans for river basins - a handbook

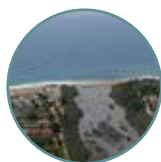
BeWater project
Society adapting to global change

A step-by-step guide to the BeWater approach, facilitating replication and modification by other basins that wish to undertake a scientific participatory process to in

HIGHLIGHTED GLOBAL CHANGE RESEARCH PROJECTS

ISACC TORDELTA

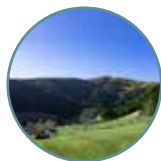
Involving society in climate change adaptation in the Tordera Delta



Principal investigator:
Javier Retana
Budget: 50.634,00 €
Entity: Fundación Biodiversidad
Period: 2017-2018

FIBER

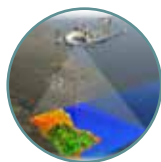
Understanding soil fertility impacts on terrestrial biomass production in a changing environment



Principal investigator:
Benjamin Stocker
Budget: 158.121,60 €
Entity: European Commission (Marie Curie Actions)
Period: 2017-2019

IMBALANCE-P

Effects of phosphorus limitations on Life, Society and the Earth System.



Principal investigator:
Josep Peñuelas
Budget: 13.600.579,00 €
Entity: EU
Period: 2014-2020

REPLIM

A network of scientific centers and managers specialized in the dynamics of high mountain lakes and peatbogs and their relationship with climate change.



Principal investigator: Marisol Felip
Budget: 1.002.347,55 €
Entity: INTERREG
Period: 2016-2019

FERT-WARM

Investigating how warming, drought, and nutrient limitations and imbalances affect the C sink capacity of Earth terrestrial biosphere.



Principal investigator:
Josep Peñuelas
Budget: 321.860,00 €
Entity: Ministerio Economía y Competitividad
Period: 2016-2019

BESOS_2017

Analyzing the changes to the Besòs basin, in the Water Quality Assessment of the River Basin Systems



Principal investigator: Joan Pino
Budget: 158.121,60 €
Entity: Consorci Besòs- Tordera
Period: 2017

REGIME-SHIFTS

Quantifying, observationally and experimentally, the responses to extreme drought conditions in model tree, shrub, plant and insect species.



Principal investigator:
Jofre Carnicer
Budget: 79.860,00 €
Entity: EU
Period: 2016-2019

Check **Annexes** to see other research projects in Functional ecology and global change Area

Ecosystem function

Each organism, every community, and every ecosystem plays an important role in the regulation of cycles of energy and nutrients which keep the planet alive. Some of these roles have been modified due to atmospheric changes, climate change, increases in disturbances and changes in land use.

At CREAM we study the effects of global change (which includes all of the aforementioned changes) with an international and multidisciplinary focus. The methods of study require working at diverse scales (from the organism to the ecosystem), combining experimentation with modeling, and conducting long-term monitoring of different ecosystems.

Research lines:

- Functional biogeography
- Chemical ecology, ecotoxicology, metagenomics, and metabolomics
- Soil function and restoration
- Atmosphere-biosphere interactions
- Stores and flows of water, carbon, and nutrients

SCIENTIFIC ADVANCES

July 13th, 2017

Trees with soft wood and thin leaves die of thirst more easily

A study published in the journal *Ecology Letters* with the participation of **Jordi Martínez-Vilalta** and **Francisco Lloret** warns that increasing droughts could affect forests' species composition and structure, making them more vulnerable. This is the first time that this has been demonstrated on a global scale and is particularly worrisome given contemporary climate change.



Views from a Pinus pinea forest, affected by drought at Maresme.
Credit: José Luis Ordóñez

September 19th, 2017

The greening of the earth is reaching its limit

A new study led by **Josep Peñuelas** and published in *Nature Ecology and Evolution* reveals that CO₂ abundance in the atmosphere no longer has a powerful fertilizing effect on vegetation. The greening that has been observed in recent years is slowing and this will cause CO₂ levels in the atmosphere to rise, thus increasing temperatures and leading to increasingly severe changes in climate.



Credit: Josep Fuster

December 4th, 2017

For the time being, forests are helping to slow CO₂ accumulation and climate change

A study led by **CREAF** published in the journal *Scientific Reports* shows that decreases in pollutant deposition and the increase in atmospheric CO₂ have stimulated photosynthesis and carbon sequestration in forests. Therefore, it is crucial to understand how carbon circulates in the atmosphere, in living organisms, oceans, and soils in order to anticipate the effects of climate change.



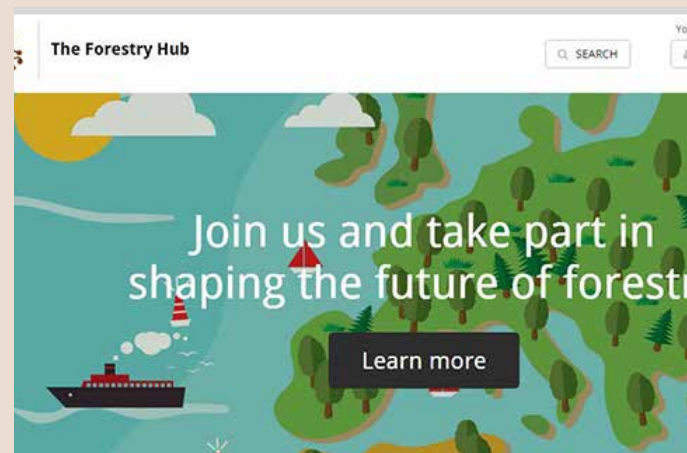
Located in the northern Belgium, Brasschaat forest is a deciduous temperate forest and one of the sites analyzed for 14 years during the research.
Credit: Johan Neegers

SCIENCE FOR ENVIRONMENTAL MANAGEMENT

May 22nd, 2017

The 'Tinder' of the forestry and environment sectors

The Forestry Hub is a digital tool for getting in touch with actors in the forestry and environment sectors, capable of effectively uniting supply and demand of services for those involved. CREAF researcher **Enrique Doblas** is the Hub's scientific coordinator.



HIGHLIGHTED ECOSYSTEM FUNCTION RESEARCH PROJECTS

CLISWELN

Climate Services for the Water-Energy-Land-Food Nexus



Principal investigator:

Jordi Martínez-Vilalta

Budget: 1,004,303.20 €

Entity: Joint Programming Initiative JPI Climate

Period: 2017-2020

StoiCa

Resilience of stoichiometry in subarctic soils under temperature-induced Carbon losses: where does the Nitrogen go?



Principal investigator:

Sara Marañon

Budget: 170,121.60 €

Entity: European Commission (Marie Curie Actions)

Period: 2017-2019

GREEN LINK

Restore desertified areas with an innovative tree growing method across the Mediterranean border to increase resilience



Principal investigator:

Josep Maria Alcañiz

Budget: 2,891,702.00 €

Entity: European Commission (Life+)

Period: 2016-2020

SAPFLUXNET

A global database of sap flow to unravel the ecological drivers of transpiration regulation in woody plants



Principal investigator: Rafael Poyatos

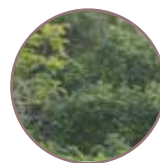
Budget: 196,020.00 €

Entity: Ministerio Economía y Competitividad

Period: 2015-2018

NITRIPHYLL

A novel approach to determine canopy nitrification in the phyllosphere of European forests: combining multiple isotope tracers and proteogenomic techniques



Principal investigator:

Rossella Guerrieri

Budget: 158.121,60 €

Entity: European Commission (Marie Curie Actions)

Period: 2016-2018

PHLOEMAP

Hydraulic functional traits as determinants of forest function and drought responses. Putting xylem and phloem attributes into the functional trait map



Principal investigator:

Elisabet Roberts

Budget: 158.121,60 €

Entity: European Commission (Marie Curie Actions)

Period: 2016-2018

FERTICAR

Use of biochar for soil nitrogen cycling regulation and for a new generation fertilisers



Principal investigator: Josep-

Maria Alcañiz Baldellou

Budget: 193.600,00 €

Entity: Ministerio Economía y Competitividad

Period: 2016-2018

Check **Annexes** to see other research projects in Forest ecology and wildfires Area



Earth Observation

Remote sensing and geographic information systems have permitted analysis of the territory at large scales, and which are at the same time increasingly detailed. These analyses become fundamental for making decisions about the sustainable management of natural resources, designing networks of protected areas, and facing the threats of global change.

Thanks to research carried out by CREAM in this area, we have been able to provide to the public a collection of digital maps of land use of various periods of time, design new formats for storing and distributing thematic cartography, and develop computing tools such as the MiraMon GIS, all of which permit the consultation and analysis of a large quantity of information about our natural heritage.

Research lines:

- Geospatial products and international standards
- Long term ecosystem monitoring
- GIS and remote sensing methodologies and applications
- Regional and global environmental information services

SCIENTIFIC ADVANCES

February 7th, 2017

Remote sensing of leaf pigments will improve climate change models

An international team of researchers co-led by **Josep Peñuelas** has developed a new method for monitoring changes in the photosynthetic activity of perennial conifers throughout the year. This new technique, presented in the published article in ***Proceedings of the National Academy of Sciences***, based on the analysis of remote sensing images captured by satellites, will improve global models of atmospheric carbon capture and permit more precise predictions about climate change.



The mountain pine (*Pinus uncinata*) is a conifer, native to high elevation habitats from southwestern to Central Europe, including the Pyrenees. Credit: Lluís Comas

December 18th, 2017

How the forests of the Iberian Peninsula have changed over 25 years?

A study carried out by UAB and **CREAF** researchers, published in ***Forest Ecology and Management***, shows vegetation dynamics in three regions of the Iberian Peninsula between 1987 and 2012. The increase in drought episodes and the lack of water in the soil have favored Mediterranean species. At the same time, conifers are losing ground because they are less adapted to droughts. These trends have been confirmed through satellite remote sensing images.

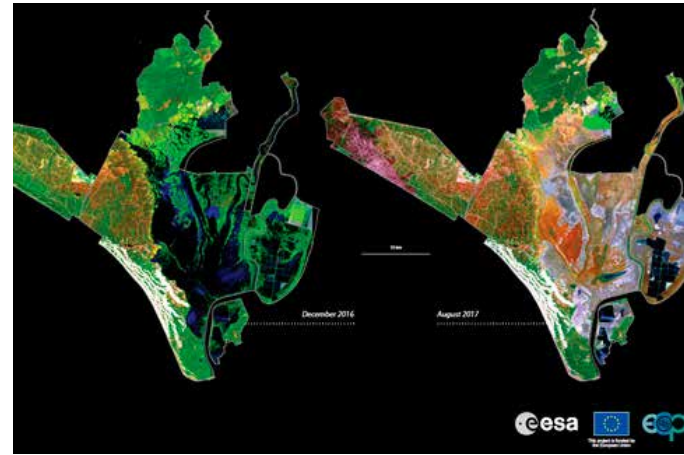


Two broadleaved species in Montseny, a beech forest in the background, and a holm oak forest in the foreground. Credit: José Luis Ordóñez

December 19th, 2017

Earth observation can help conserve protected natural areas

To celebrate passing its halfway point, the European project **ECOPOTENTIAL** is organizing a photo exhibition and a workshop that will generate awareness of innovations in the field of remote sensing which can be applied to the management, monitoring and conservation of protected natural areas.



Credit: Landsat 8 OLI (RGB 654 bands). Courtesy of USGS/NASA Landsat program. Processed by LAST-EBD (CSIC).

SCIENCE FOR ENVIRONMENTAL MANAGEMENT

February 24th, 2017

The Catalanian Government and CREAM define the Catalanian program for comprehensive biodiversity monitoring

This pioneering initiative puts Catalonia at the forefront of biodiversity monitoring, together with countries such as the United Kingdom and the United States of America.



The speakers of the SISEBIO's presentation during the intervention of CREAM director, Javier Retana.

HIGHLIGHTED EARTH OBSERVATION RESEARCH PROJECTS

WEOBSERVE

An Ecosystem of Citizen Observatories for Environmental Monitoring



Principal investigator: Joan Masó
Budget: 1.069.507,50 €
Entity: European Commission (Marie Curie Actions)
Period: 2017-2020

WATERINNEU

Applying European market leadership to river basin networks and spreading of innovation on water ICT models, tools and data.



Principal investigator: Lluís Pesquer
Budget: 914.991,00 €
Entity: EU
Period: 2015-2017

SMURBS. ERA-PLANET

SMart URBan Solutions for air quality, disasters and city growth



Principal investigator: Lluís Pesquer
Budget: ERA- Planet
Entity: European Commission (Joint Transnational Call of ERA-PLANET)
Period: 2017-2020

MIRAMON

The geographic information system and remote sensing software MiraMon.



Principal investigator: Xavier Pons (Institució Catalana de Recerca i Estudis Avançats – ICREA)
Budget: 29.000,00 €
Entity: Generalitat de Catalunya
Period: 2017

INDRO

Remote sensing INDicators for DRought monitoring



Principal investigator: Manuela Balzarolo
Budget: 170.121,60 €
Entity: European Commission (Marie Curie Actions)
Period: 2017-2019

GEO-Essential. ERA-PLANET

Variables workflows for resource efficiency and environmental management



Principal investigator: Joan Masó
Budget: ERA-Planet
Entity: European Commission
Period: 2017-2020

ERA-PLANET

It will provide advanced decision support tools and technologies aimed to better monitor our global environment and share the information and knowledge in different domain of Earth Observation.



Principal investigator: Nicola Pirrone (CNR – Istituto sull'Inquinamento Atmosferico)
CREAF: Joan Masó
Budget: 50.730.791,00 €
Entity: EU
Period: 2016-2021

C-GLOPS1

Providing global biophysical variables and land surface phenology from Earth observation satellites.



Principal investigator: Alexandre Verger
Budget: 216.000,00 €
Entity: EU
Period: 2015-2019

Check **Annexes** to see other research projects in Environmental and territorial analysis and GIS Area

CROSS-CUTTING TOPICS



Forests



Citizen science



Sustainability



Big Data and
data quality



Ecosystem
services



Mediterranean
Basin



In this area, CREAM focuses its research on the structure, dynamics and functioning of forests. In particular, we study the decline, regeneration and global functioning of forests by studying nutrient and water cycles and uses. In addition, we develop mathematical models, carry out forest inventories, and create databases.



Holm oak's leaf. Credit: José Luis Ordóñez

Featured news

May 15th, 2017

The lack of management in Mediterranean forests is accelerating substitutions of pine with holm oak

A **CREAF-led study** published in *Global Change Ecology* shows that colonization by holm oak and other broadleaf species in the Iberian Peninsula is occurring much faster than previously thought, the main causes being reductions in forest management and climate change.

Highlighted project

ALERTA FORESTAL

Citizen science project to monitor the health status of forests and create a forest alert system through a citizen science platform.

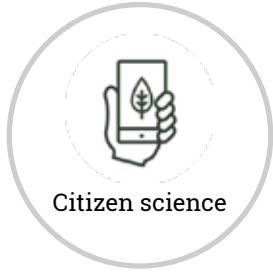
Principal investigator: Lluís Brotons and Jordi Vayreda

Budget: 320.000,00 €

Entity: Fundació Bancària "La Caixa"

Period: 2016-2018





Despite the youth of this program at CREAM, we have already shown that citizen science can be used to set up early warning systems, environmental management systems, or even the collaborative drafting of climate change adaptation strategies.

Featured news

October 24th, 2017

Citizen science is a useful and reliable tool for studying the mosquitoes driving global epidemics

According to a study published in *Nature Communications* citizen science has allowed the researchers to cover much more geographic space in comparison to traditional methods, reducing the economic cost of the two-year study eight-fold..



Participants using the app Mosquito Alert. Credit: Mosquito Alert

Highlighted project

GROUNDTRUTH

Environmental knowledge discovery of human sensed data

Principal investigator: Joan Pino

Budget: 5.740.631,25 €

Entity: European Commission (H2020)

Period: 2016-2010





Given the contemporary challenges of global change, a transition towards a sustainable economic system is more imperative than ever. The production of sufficient primary products must be assured with minimal environmental or social impacts and without altering ecosystem services. In this context, sustainable management of resources such as forests and water is key.



Vietnamese man.

Featured news

December 18th, 2017

Men from wealthy countries are getting taller because their diet is rich in nitrogen and phosphorus

A **CREAF-led** study published in *Scientific Reports* has concluded that mean male height in countries with a high level of GDP is 23 cm greater than in countries with a low level, a difference that has risen by 1.5 cm over the last 30 years. Thanks to a more varied diet rich in animal products, the annual nitrogen and phosphorus intake of people in wealthy countries is practically twice that of those in poor countries.

Highlighted project

POLYFARMING

Demonstration of a new agro-silvo-pastoral land use to improve farm profitability in mountain areas

Principal investigator: Marc Gràcia

Budget: 1.135.787,00 €

Entity: European Comission (Life+)

Period: 2016-2021





Big data offers great opportunities for research but also requires new approaches for managing it efficiently, rigorously and accurately, all depending on the particularities of associated thematic information. On the other hand, the quality of the alphanumeric and spatial information of the available data must be analyzed. It is necessary to verify that access, maintenance and propagation of metadata is adequate and consistent.



Source: Pixabay (CC0)

Featured news

November 16th, 2017

Fossil fuel emissions hit record high after unexpected growth: Global Carbon Budget 2017

The **Global Carbon Budget 2017** has analyzed carbon emission sources and sinks worldwide. This year the researcher **Benjamin Stocker** from CREAM has collaborated in the report contributing and preparing data about how the change in the use we give to the territory has affected CO₂ emissions.

Highlighted project



C3S- Essential Climate Variable Datasets

Providing Terrestrial Essential Climate Variables from satellite data

Principal investigator: Aleixandre Verger
Budget: 68.025,00 €
Entity: EU
Period: 2016-2018



Ecosystem services are being moved to the center of national and European policies, and used as indicators of the quality of society's interaction with the environment. The next step is to place ecosystem services in the centre of decision-making and environmental policies. Once this is done we will have the tools to identify what management options can help mitigate the effects of global change, optimize the benefits, and avoid costs and potential risks to ecosystems and societies.



Barcelona's urban gardens are a good way to contribute in green infrastructure.
Credit: Corina Basnou

Featured news

March 14th, 2017

Barcelona sets an example for management of green space and air quality

A report requested by the **European Commission** considers multiple societal changes and potential nature-based solutions. A group of European researchers helped write the report, among them CREAM ecologist **Corina Basnou**.

Highlighted project

ECOPOTENTIAL

Improving future ecosystem benefits through Earth Observations

Principal investigator: Antonello Provenzale (CNR) / CREAM: Joan Masó

Budget: 14.874.340,00 €

Entity: EU

Period: 2014-2019





CREAF has studied these ecosystems due to their ecological value as well as physical proximity to the center. It is for these reasons that many of CREAM's research lines center on this geographic area. The main objectives of this research are to measure the impact of global change on Mediterranean ecosystems by assessing the multiple interactions that occur between climate, living beings, fires, and human activity, also taking into account the region's evolutionary history.



Scrublands of the Garraf Natural Park. Credit: Jorge Franganillo

Featured news

July 19th, 2017

Climate change is already threatening the Mediterranean ecosystems of Catalonia

A large research team at **CREAF** has compiled an extensive review of studies and databases that reveals drought and an increase in temperature are already causing large impacts on Mediterranean ecosystems in Catalonia. The study, published in ***Environmental and Experimental Botany***, lists effects as species such as species substitutions, greater aridity, higher forest fire risk, lower soil fertility, and lower water availability, among other negative impacts.

Highlighted project

BIOCLIM

Bioclimatic niche and plant community dynamics in response to climate change

Principal investigator: Francisco Lloret

Budget: 193.600,00 €

Entity: Ministerio de Economía y Competitividad

Period: 2016-2019



CONSOLIDATED RESEARCH GROUPS

“CREAF coordinates seven Consolidated Research Groups recognized by the Government of Catalonia. This recognition is intended to support the research groups that work in the different scientific areas, in order to recognize and promote high-quality research, the transfer of knowledge and the internationalization of its scientific activities.”

BEEMed Biodiversity and evolution of mediterranean ecosystems

Research Group focused on the study of the processes generating and maintaining biodiversity in the Mediterranean region at different spatial and temporal scales, while analyzing the effects of global change on biodiversity. Studies include all levels of variation, from genes to organisms, landscapes and communities.



Forest dynamics and wildfires

Research Group focused on the study of the structure and functioning of forest ecosystems (forests, scrublands and natural grasslands) and the changes in forest ecosystems by different impacts of global change: fires, deforestation and climate change.



GECA Environmental Change Ecology Group

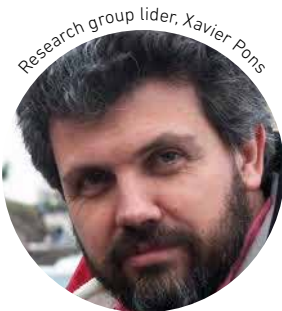
Research Group that studies of the interdependence between the biogeodynamics of the biogeosphere (transport, storage and reactivity of materials and energy related to organisms) and the different ways that biodiversity manifests and distributes (genes, biological type, species, communities, biomes).





Global Ecology Unit

Research Group that studies the global, climatic and anthropogenic local change effects on terrestrial ecosystems.



Grumets

The aim of the Methods and Applications in Remote Sensing and Geographic Information Systems Research Group, GRUMETS, is the development of new algorithms, theory and methodologies in these fields as well as the integration of the fields of geographic information science, geoservices and interoperability, standardization, metadata, applied work and software development.



PROTECSOLS Consolidated Research Group on Soil Protection

Research Group focused on the study of soil degradation associated with pollution, mining activities, infrastructures and wildfires.



Response of terrestrial ecosystems to changing environmental gradients

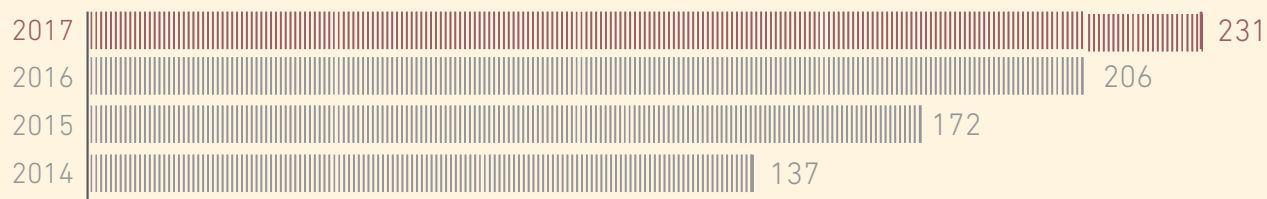
Research Group that includes researches devoted to study terrestrial ecosystems functioning. The group focuses on ecosystem responses to environmental changes that at large extent are determined by human activity and are often related to global change. These studies correspond to several topics and methodological approaches.

A person with long brown hair tied back, wearing a dark grey long-sleeved shirt, is kneeling in a field of tall, dry grass. They are holding a large, clear plastic map or document with a purple border. In their right hand, they hold a yellow pencil, pointing it at the map. To their right, a blue backpack with a yellow interior is visible. In the foreground, there is a white clipboard with papers on it. The scene is brightly lit, suggesting a sunny day.

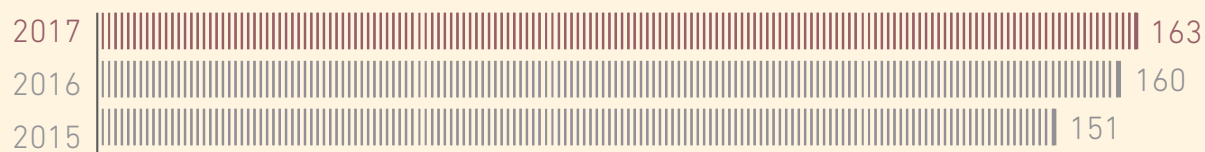
SCIENTIFIC OUTPUT

KEY NUMBERS

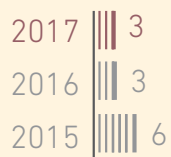
SCI publications



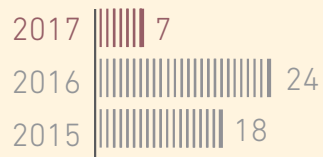
Contribution in national and international scientific conferences



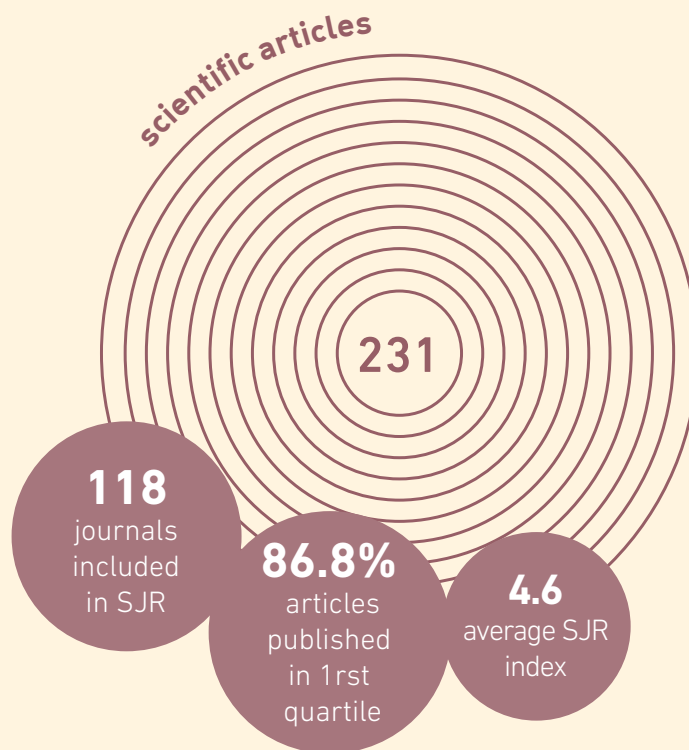
Books



Non SCI publications



Book chapters



Journals

JOURNAL	Article	Quartile	SJR index
Acta Parasitologica	1	3	0,532
African Entomology	1	3	0,37
Agricultural and Forest Meteorology	1	1	1,976
Agriculture, Ecosystems and Environment	1	1	1,612
Agronomy	1	2	0,345
American Journal of Botany	1	1	1,647
Animal Behaviour	1	1	1,661
Annals of Forest Science	1	1	0,765
Applied and Environmental Microbiology	1	1	1,691
Atmosphere	1	2	0,636
Atmospheric Environment	2	1	1,466
Biodiversity and Conservation	2	1	1,169
Biogeosciences	2	1	2,328
Biological Conservation	2	1	2,322
Biological Control	1	1	1,012
Biological Invasions	2	1	1,294
Biological Reviews	1	1	4,345
Biomass and Bioenergy	1	1	1,188
BioScience	1	1	2,039
Biotropica	1	1	1,093
Bird Conservation International	1	2	0,605
Boletín Geológico y Minero	1	4	0,211
Catena	1	1	1,177
Chemosphere	1	1	1,417
Computers, Environment and Urban Systems	1	1	1,14
Conservation Letters	2	1	2,936

JOURNAL	Article	Quartile	SJR index
Cryptogamie, Algologie	1	2	0,518
Dendrochronologia	1	1	0,953
Diversity and Distributions	2	1	2,651
Ecography	4	1	3,592
Ecological Entomology	2	1	0,987
Ecological Modelling	3	2	0,941
Ecology	3	1	3,255
Ecology and Evolution	6	1	1,579
Ecology Letters	5	1	7,634
Ecosphere	6	1	1,333
Ecosystem Services	1	1	1,935
Ecosystems	3	1	2,013
eLife	1	1	5,984
Environmental and Experimental Botany	2	1	1,453
Environmental Pollution	1	1	1,786
Environmental Research	1	1	1,394
Environmental Research Letters	1	1	2,628
Environmental Science and Pollution Research	1	2	0,813
European Journal of Forest Research	1	1	0,905
European Journal of Wildlife Research	1	2	0,739
Experimental Agriculture	1	2	0,389
FEMS Microbiology Ecology	1	1	1,396
Forest Ecology and Management	7	1	1,615
Forest Systems	1	3	0,439
Forests	4	1	0,679

JOURNAL	Article	Quartile	SJR index
Frontiers in Ecology and Evolution	1	1	4,779
Frontiers in Microbiology	1	1	1,731
Functional Ecology	4	1	3,165
Functional Plant Biology	1	1	1,045
Geoscientific Model Development	2	1	2,07
Global and Planetary Change	1	1	1,741
Global Change Biology	17	1	4,768
Global Ecology and Biogeography	5	1	4,061
Global Environmental Change	1	1	3,507
Historical Biology	1	2	0,567
IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing	1	3	1,427
IEEE Transactions on Geoscience and Remote Sensing	1	1	2,461
IForest – Biogeosciences and Forestry	1	2	0,451
Information Technology for Development	1	2	0,673
Insect Conservation and Diversity	2	1	1,057
Journal of Animal Ecology	1	1	2,963
Journal of Applied Ecology	1	1	2,869
Journal of Avian Biology	3	1	1,086
Journal of Biogeography	2	1	2,467
Journal of Bryology	1	3	0,364
Journal of Ecology	3	1	3,736
Journal of Environmental Engineering and Landscape Management	1	2	0,284
Journal of Geophysical Research: Biogeosciences	2	1	1,996

JOURNAL	Article	Quartile	SJR index
Journal of Hydrology: Regional Studies	1	1	0,965
Journal of Limnology	1	2	0,574
Journal of Paleolimnology	1	1	0,957
Journal of Plant Ecology	1	1	0,815
Journal of Stored Products Research	1	1	0,814
Journal of Tropical Ecology	1	2	0,673
Journal of Vegetation Science	1	1	1,872
Land Use Policy	1	1	1,376
Metabolites	1	4	0,236
Molecular Ecology	3	1	3,508
Mycorrhiza	1	1	1,087
Nature Climate Change	1	1	8,256
Nature Communications	3	1	6,399
Nature Plants	1	1	3,379
New Phytologist	4	1	3,573
Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering	1	2	0,372
Oecologia	1	1	1,72
Oikos	1	1	2,313
Palaeogeography, Palaeoclimatology, Palaeoecology	1	1	1,303
Pedosphere	1	2	0,654
Pest Management Science	1	1	1,176
Physical Review	1	2	0,993
Plant Biology	1	1	0,966
Plant Cell and Environment	5	1	2,646
Plant Ecology	2	1	0,929

JOURNAL	Article	Quartile	SJR index
PLoS ONE	3	1	1,201
Proceedings of the National Academy of Sciences of the United States of America	2	1	6,321
Proceedings of the Royal Society B: Biological Sciences	2	1	2,541
Rapid Communications in Mass Spectrometry	1	2	0,74
Remote Sensing	4	1	2,461
Revista de Teledeteccion	1	4	0,13
Revue Francaise de Photogrammetrie et de Teledetection	1	4	0,142
Science	3	1	13,535
Science of the Total Environment	1	1	1,621
Scientific Reports	9	1	1,625
Sociobiology	1	2	0,495
Soil Biology and Biochemistry	1	1	2,132
Sustainability (Switzerland)	1	1	1,096
Tree physiology	1	1	1,394
Trends in Plant Science	3	1	4,535
Water	1	2	0,548
Water Resources Research	1	1	2,383
Water, Air, and Soil Pollution	1	2	0,578
Earth's Future	1		
Ecosistemas	4		
Nature Ecology and Evolution	4		
TOTAL	227		224,15

Scientific articles

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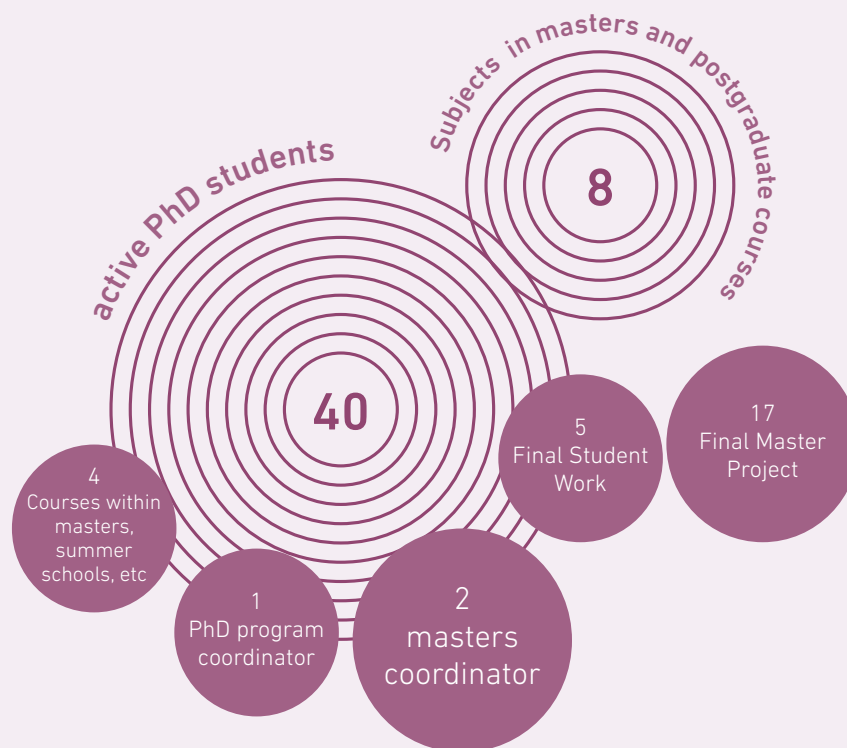
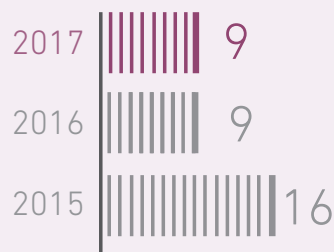
[Check Annexes to see more CREAM Scientific output](#)

TRAINING



KEY NUMBERS

PhD theses



PHD IN TERRESTRIAL ECOLOGY

CREAF coordinates the PhD in Terrestrial Ecology which consists of writing, presenting and defending an original piece of research which, in this case, is framed within the ambit of the terrestrial ecology.

This PhD programme is aimed at students interested in understanding the processes involved in global environmental change and the loss of biodiversity, as well as possible actions to mitigate the damaging effects of environmental changes and the conservation of natural resources.

The PhD programme consists of 35 lecturers and associated researchers working on the following lines of research: Biodiversity, Functional ecology and global change; Forest ecology and fires; Soil protection and conservation; Remote sensing and GIS.

Coordinator: Anna Àvila

Lecturers: Josep Maria Alcañiz Balldellou, Pilar Andrés Pastor, Xavier Arnan, Anna Àvila Castells, Jordi Bosch Gras, Jofre Carnicer Cols, Jordi Catalan Aguilà, Bernat Claramunt López, Enrique Doblas Miranda, Xavier Domene Casadesús, Xavier Espadaler Gelabert, Josep Maria Espelta Morral, Iolanda Filella Cubells, Marc Estiarte Garrofé, Marc Gràcia Moya, Francisco Lloret Maya, Joan Llusà Benet, Arnald Marcer Batlle, Jordi Marínez Vilalta, Maria Mayol Martínez, Maurizio Mencuccini, Romà Ogaya Inurrigarro, Oriol Ortiz Perpinyà, Josep Peñuelas Reixach, Joan Pino Vilalta, Josep Piñol Pascual, Eduard Pla Ferrer, Rafael Poyatos López, Javier Retana Alumbroeros, Miquel Riba Rovira, Angela Ribas Artola, Ferran Rodà de Llanza, Anselm Rodrigo Domínguez, Jordi Sardans Galobart, Sandra Saura Mas, Robert Savé Montserrat, Daniel Sol Rueda, David Tarrasón.

PHD IN TERRESTRIAL ECOLOGY THESES

AGUADÉ D. Understanding the physiological mechanisms of drought-induced decline in Scots pine (*Pinus sylvestris* L.).
Universitat Autònoma de Barcelona
Supervisors: J. Martínez-Vilalta and R. Poyatos.

CARNICERO CAMPANY P. Evolution, biogeography and systematics of the genus *Cymbalaria* Hill.
Universitat Autònoma de Barcelona
Supervisors: M. Galbany, Ll. Sáez and N. García Jacas.

MARTÍNEZ GUTIÉRREZ, P.G. Geographic patterns of distribution and abundance of large carnivore prey in the Neotropics
Universitat Autònoma de Barcelona
Supervisors: F. Palomares Fernandez and N. Fernández Requena.

LIU D. Climate change impact on Mediterranean forests and shrubland, their ecophysiology, demography and community composition.
Universitat Autònoma de Barcelona
Supervisors: J. Peñuelas and R. Ogaya.

ZHANG C. The photochemical reflectance index (PRI) as an indicator of changes in photosynthetic dynamics and gross primary productivity in response to climate change.
Universitat Autònoma de Barcelona
Supervisors: J. Peñuelas and I. Filella.

OSORIO S. Spatio-temporal variability of bee/wasp communities and their host-parasitoid interaction networks
Universitat Autònoma de Barcelona
Supervisors: J. Bosch and X. Arnan.

OTHER PHD THESES

OLIVEROS G. Comparativa entre les vocalitzacions de llarga distància d'*Alouatta palliata* entre poblacions de Costa Rica i dels Tuxtlas mexicans.
Universitat de Barcelona
Supervisors: B Claramunt, M Alcocer

SITI MARIAM MUHAMMAD NOR. Physiological ecology of mangrove seedlings in response to sea level rise.
University of Edinburgh.
Supervisors: M. Mencuccini, G. Jackson, M. Huxham.

CÂMARAT. Spatio-temporal variation in the interactions between extrafloral nectar-bearing plants and ants in the Caatinga: anthropogenic chronic disturbance and climate change effects.
Universidade Federal de Pernambuco
Supervisors: I. Leal and X. Arnan.

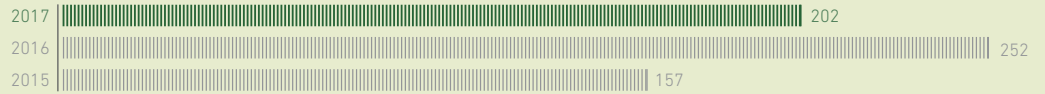
Check Annexes to see all Training activity of CREAMF



COMMUNICATION
AND OUTREACH

KEY NUMBERS

Impacts in mass media



Press releases

37

Impacts in mass media

202

Press releases




3650
subscribers
to our monthly
newsletter

1369 followers in LinkedIn



2394 likes in Facebook



Blog sessions 57.612



+ 37.136
unic visitors
of our blog
in 2017

2016

Blog sessions 57.150

+ 38.000 unique visitors
of our blog in 2016

2015

Blog sessions 46.000

+ 31.000 unique visitors
of our blog in 2015

followers on twitter



Total

2017 | 8260 followers

Total

2016 | 6800 followers

Total

2015 | 5000 followers



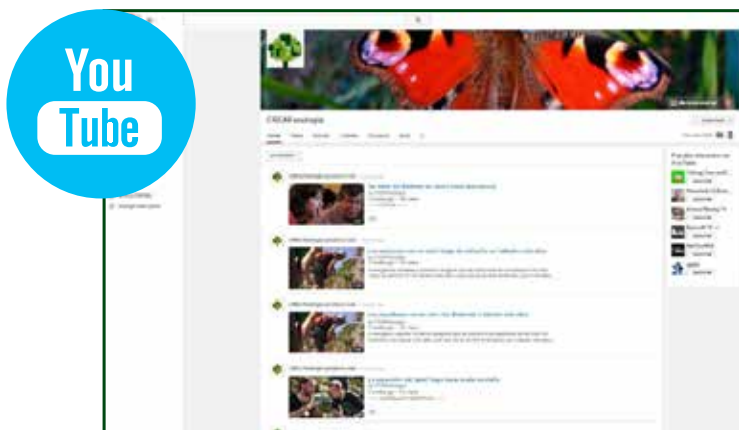
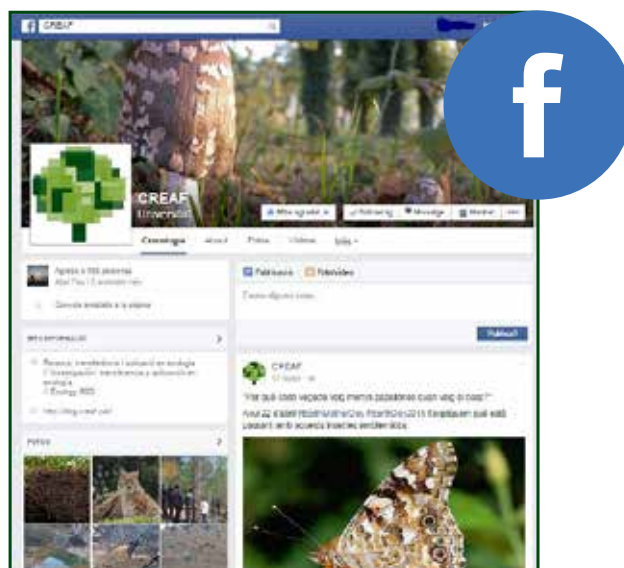
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HIGHLIGHTED PRESS COVERAGE

CATALUNYA | EL DIARI MUNDI | 18 DE MARÇ DE 2017

Campanya para controlar la plaga de la procesionaria

El CREAR pide la colaboración ciudadana a través de las redes sociales



ANIMACIÓN El CREAR ha lanzado una campaña para controlar la plaga de la procesionaria de la hiedra (Pezomachus nebulosus) que afecta a los bosques de la zona de la Sierra de Guadalupe. La campaña se centra en la colaboración ciudadana a través de las redes sociales para identificar y reportar los árboles afectados.

En 2016, 160.000 árboles de pinos se vieron afectados por la plaga

El CREAR ha lanzado una campaña para controlar la plaga de la procesionaria de la hiedra (Pezomachus nebulosus) que afecta a los bosques de la zona de la Sierra de Guadalupe. La campaña se centra en la colaboración ciudadana a través de las redes sociales para identificar y reportar los árboles afectados.

BCN tendrá un centro para el tratamiento preventivo del VIH

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CONTRA LA ELA

18/04/2017 - El Mundo

TENDÈNCIES | EL DIARI VANGUARDIA | 04 DE AGOST DE 2017

Tendències

El efecto de los catástrofes

Quan el foc regenera la natura



L'altra cara dels incendis: tenen un paper regulador en ecosistemes i són clau per a la biodiversitat

El foc és un element natural i essencial per a la regeneració dels ecosistemes. Els incendis ajuden a eliminar la vegetació morta, permetent que la nova planta creixi més sana i forta. A més, alguns animals depenen del foc per a sobreviure o per a créixer.

El foc és un element natural i essencial per a la regeneració dels ecosistemes.

04/08/2017 - La Vanguardia

Societat | EL DIARI PERIÓDICO | 18 DE SETEMBRE DE 2017

El canvi climàtic obligarà a variar la gestió dels boscos

El canvi climàtic obligarà a variar la gestió dels boscos



El canvi climàtic obligarà a variar la gestió dels boscos

El canvi climàtic obligarà a variar la gestió dels boscos. Els arbres podran créixer més ràpidament a causa de l'augment de CO2, però també podran patir de sequera i incendis més freqüents.

El canvi climàtic obligarà a variar la gestió dels boscos

18/09/2017 - El Periódico

LA CONTRA | EL DIARI VANGUARDIA | 30 DE OCTUBRE DE 2017

“Els bacteris resistents als antibiòtics es multipliquen”

Josep Penúelas, doctor en Biologia, investigador del CREAR



“Els bacteris resistents als antibiòtics es multipliquen”

Josep Penúelas, doctor en Biologia, investigador del CREAR, explica que els bacteris resistents als antibiòtics es multipliquen i són una gran preocupació per a la salut pública.

“Els bacteris resistents als antibiòtics es multipliquen”

30/10/2017 - La Contra de La Vanguardia

Societat | EL DIARI PERIÓDICO | 19 DE DECEMBRE DE 2017

Fòsfor per ser més alts

Un estudi del CREAR ha analitzat les diferències d'altura entre països en funció de la dieta i el nivell de vida a Al Capdavaner de la classificació en suïss, danès, holandès i alemany.



Fòsfor per ser més alts

Un estudi del CREAR ha analitzat les diferències d'altura entre països en funció de la dieta i el nivell de vida a Al Capdavaner de la classificació en suïss, danès, holandès i alemany.

Fòsfor per ser més alts

19/12/2017 - El Periódico

MEDIO AMBIENTE

14 **15**

La desaparición masiva de las abejas
LA URGENCIA DEL CAMPO, EL MONOCULTIVO Y ESPECIALMENTE LOS INSECTICIDAS ESTÁN PROVOCANDO UN DADO IRREVERSIBLE A LAS POBLACIONES DE ABejas DE TODO EL MUNDO

El agua de Sant Joan
La desaparición masiva de las abejas...

La transición energética comienza ya
El agua de Sant Joan...

El agua de Sant Joan
El agua de Sant Joan...

09/07/2017 - Diario de Mallorca

canal CAMP **SABADO 19 DE AGOSTO DE 2017** **La Mañana** **SABADO 19 DE AGOSTO DE 2017 | canal CAMP 23**

El canvi climàtic ja amenaça els ecosistemes mediterranis catalans

La calor avança uns dies la collita de Favellana, que podria assolir les 10.000 tones

La Llei de Resa

19/08/2017 - La Mañana

ef Coses de la vida **SOCIETAT** **GRAN BARCELONA • HISTÒRIES que s'entrellacen de les pàgines 1 i 4** **DISTRICTES • Passada pel Putzet amb el parcònic de Sagrat, Xavi Lladó i el 4**

Impostos contra el canvi climàtic
La llei catalana introduirà un tribu sobre grans vehicles i impositives que entraran en vigor el 2019

Envants pel plàstic
Des del 1992, un total de 120 mil tones de plàstic s'han acumulat a Catalunya. La majoria s'ha arribat a substituir a al medi ambient

Alerta mediambiental a Catalunya

22/07/2017 - El Periódico

LA RIOJA **LA RIOJA** **LA RIOJA**

Otro temible enemigo que llegará a La Rioja... en coche

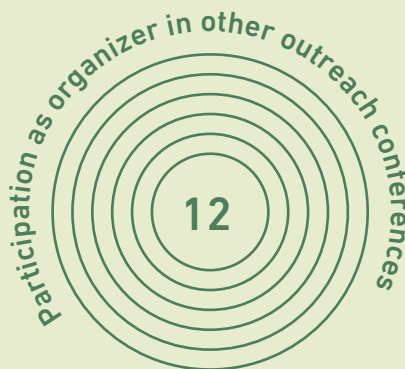
Un nuevo inquilino

¿A quién pica?

LA RIOJA MUSIC FEST 2017

21/08/2017 - La Rioja

KEY NUMBERS



OUTREACH CONFERENCES OR TECHNICAL SEMINARS

Outreach conferences or technical seminars organized by CREAM

XIV Jornada CREAM SCB ICHN. Invasions biològiques. Punt de trobada entre recerca i gestió. (technical workshop)

Place: Institut d'Estudis Catalans, Barcelona

Date: 22 November, 2017

Numbers of attendees: 150

CREAF membres involved in organising: D.Sol, J. Pino, A.Ramon.

Jornada CREAM-DIBA de transferència a tècnics municipals de medi ambient: "Des dels Ajuntaments... Com Podem Millorar la Seguretat dels Nuclis de Població davant dels Incendis Forestals?" (technical workshop)

Place: Campus UAB

Date: 10 Octubre, 2017

Numbers of attendees: 106

CREAF membres involved in organising: JM. Espelta

Ús d'esmenes orgàniques en restauració de sòls (seminar)

Place: Oficina del Parc Natural del Garraf, Sitges

Date: 11 November, 2017

Numbers of attendees: 15

CREAF membres involved in organising: V. Carabassa, J.M. Alcañiz, X. Domene

Ús històric dels boscos a Catalunya i el seu significat davant els reptes del futur (seminar)

Place: Institut d'Estudis Catalans, Barcelona

Organitzadors: CREAM, Institut d'Estudis Catalans IEC, Societat Catalana de Biologia SCB

Date: 7 November, 2017

Numbers of attendees: 50

CREAF membres involved in organising: F. Lloret, JM. Espelta, J. Pino, J. Martínez-Vilalta, J. Terradas

WaterInnEU Final project Meeting (meeting)

Place: Casa de la Convalescència, Barcelona

Date: 24-25 February, 2017

Numbers of attendees: 20

CREAF membres involved in organising: Ll. Pesquer, J. Masó, E. Prat

The role of Research and innovation in EuroGEOSS (scientific workshop)

Place: Washington D.C.

Date: 23 October, 2017

Number of attendees: 40

CREAF membres involved in organising: J. Masó

Resilience and cricality in Mediterranean ecosystems (symposium)

Place: Sevilla, XIV MEDECOS & XIII AEET meeting.

Date: 31st January - 4th February, 2017

CREAF membres involved in organising: E. Batllorí, F. Lloret, Ll. Brotons L.



Check Annexes to see more CREAM outreach activity

ANNEXES



ANNEXES PUBLICATIONS

No SCI publications

AVILA A., AGUILLAUME L. (2017). Monitorización y tendencias de la deposición de N en España, incluyendo el polvo sahariano. *Ecosistemas* 26, 16-24.

FERNÁNDEZ-MARTÍNEZ M., BOGDZIEWICZ M., ESPELTA JM., PEÑUELAS J. (2017). Nature beyond Linearity: Meteorological Variability and Jensen's Inequality Can Explain Mast Seeding Behavior. *Frontiers in Ecology and Evolution*, 5:134., doi: 10.3389/fevo.2017.00134.

HERRANDO, S., KELLER, V., VOŘÍŠEK, P., KIPSON, M., FRANCH, M. ANTON, M., PLA, M., VILLERO, D., SIERDSEMA, H., KAMPICHLER, C., TELENSKI, T., GILLINGS, S., JOHNSTON, A., GOTTSCHALK, T., GUÉLAT, J., SATTLER, T., BROTONS, L., TITEUX, N., JIGUET, F., KÉRY, M. & MILANESI, P. (2017) High resolution maps for the second European Breeding Bird Atlas: a first provision of standardised data and pilot modelled maps *Vogelwelt* 137:33-41.

PLA, M., DUANE, A., & BROTONS, L. (2017). Potential of UAV images as ground-truth data for burn severity classification of Landsat imagery: approaches to an useful product for post-fire management. *Revista de Teledetección*, (49), 91-102.

POYATOS R, SUS O, BADIELLA L, MENCUCCINI M, MARTÍNEZ-VILALTA J. (2017). Gap-filling a spatially-explicit plant trait database: comparing imputation methods and different levels of ecological information. *Biogeosciences Discussions*. doi: 10.5194/bg-2017-503.

SALAS CHALLCO BM., MASÓ J., PESQUER L. (2017) Estudio del estándar WaterML. *GeoFocus* 19: 129-150. doi: 10.21138/GF.485.

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Book chapters

ALCAÑIZ J.M., CARABASSA V., DOMENE X. CAÑIZARES R. (2017) Rehabilitation of limestone quarries, the case of La Falconera (Garraf), p: 24-30. In: *Soil uses and Landscape on the Barcelona outskirts. Pre-Conference tour of 1st World Conference on Soil and Water Conservation under Global Change CONSOWA 2017*; edited by J.M. Alcañiz, printed by Diputació de Lleida, 41 p. ISBN 978-84-697-2816-1.

CAÑIZARES, R., RAYA, I., DOMENE, X., CARABASSA, V., ALCAÑIZ, J.M. (2017). Biochar amendment do not increase soil water retention in a sandy-loam mediterranean soil. In: Simó I, Poch RM, Pla I eds, *Extended Abstracts of the 1st World Conference on Soil and Water Conservation under Global Change – CONSOWA*, pp. 815. ISBN: 978-84-697-2909-0.

CARABASSA, V., FRANCO, K., KALLEN, S., ALCAÑIZ, J.M. (2017). Restoring abandoned agro-silvo-pastoral landscapes using the Cocoon ecotechnology. In: Simó I, Poch RM, Pla I eds, *Extended Abstracts of the 1st World*

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CARABASSA, V., FRANCO, K., KALLEN, S., RUBIO, J.L., ANDREU, V., GONZÁLEZ, F.; VIERA, G.; CRESCENZO, V., BERTAINA, F.; CASTRO, A., GUTIÉRREZ, I., KORKOUMPAS, D., GRAMMELIS, P., ASJES, A., LÖVENSTEIN, H., ALCAÑIZ, J.M. (2017) The Green Link project: restoring desertified areas with an innovative tree growing method across mediterranean basin to increase resilience. In: Simó I, Poch RM, Pla I eds, Extended Abstracts of the 1st World Conference on Soil and Water Conservation under Global Change – CONSOWA, pp. 815. ISBN: 978-84-697-2909-0.

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ESTEVE M.A., CARREÑO FRUCTUOSO M.F., MOYA PÉREZ J.M., MONTOYA P., FERNÁNDEZ-MARTÍNEZ J; PÉREZ-NAVARRO M.A., LLORET F. (2017) La respuesta de los bosques de *Pinus halepensis* al cambio climático y los eventos de sequía extrema. En: Los riesgos ambientales en la Región de Murcia. Ediciones Universidad de Murcia. In: Los Riesgos Ambientales en la Región de Murcia.

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a Catalunya: resum executiu del Tercer informe sobre el canvi climàtic a Catalunya. ISBN 9788439395942 (Generalitat de Catalunya). – ISBN 9788499653754 (Institut d'Estudis Catalans).

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improve air quality in Mediterranean areas. Cost Action Gree Infrastructure: nature based solution for sustainable and resilient cities. Orvieto, Italy, 4-7 April (Oral communication).

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gradients in European ant communities. XXIII Simpósio de Mirmecologia, An International Ant Meeting. Curitiba, Brazil. October 23-27, 2017 (Invited presentation)

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SAVÉ R., FUNES I., ARANDA X, BIEL C., DE HERRALDE F., GRAU B., CANTOS G., PLA E., PASCUAL D., VICENTE S., ZABALZA J., BORRÀS G. (2017) Indicators for the evaluation of climate change adaptation measures of agriculture in Catalonia. 2nd Conference on Agriculture and Climate Change. Sitges, 26-28 March (Poster)

SAYOL F., FERRANDIZ-ROVIRA M. (2017). Selecció sexual: perquè els mascles lluiten les aranyes i les femelles trien? Seminari 2017 Sexe, desenvolupament i evolució. Mataró (Catalonia) 21th March, 2017 (Oral communication)

SILVA, I.L.H., LEAL I.R., NETO J.D.R. & ARNAN X. (2017) The effects of chronic anthropogenic disturbance on Caatinga ant communities: spatio-temporal dynamics and the role of behavioral plasticity as adaptation to environmental change. XXIII Simpósio de Mirmecologia, An International Ant Meeting. Curitiba, Brazil. October 23-27, 2017 (Oral communication)

SILVA, L.L., LEAL I.R. & ARNAN X. (2017) Morphological adaptations of *Dinoponera quadriceps* Santschi (Formicidae, Ponerinae) workers along human disturbance and rainfall gradients in the Brazilian Caatinga. XXIII Simpósio de Mirmecologia, An International Ant Meeting. Curitiba, Brazil. October 23-27, 2017 (Oral communication)

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STOCKER, B.D., SENEVIRATNE, S., ZSCHEISCHLER, J., PRENTICE, C., KEENAN, T., PEÑUELAS, J. (2017) Soil moisture effects are underestimated by global GPP datasets. FLUXNET Workshop 2017, Berkeley, California, June 7-9, 2017. (Oral communication)

SWINNEN E., SMETS B., FREY C., LACAZE R., RAMON D., CARRER D., PINAULT F., VERGER A., CAMACHO A. (2017). FAPAR, LAI and Surface Albedo CDRs. C3S General Assembly, Toulouse, 3-6 March, 2017 (Poster)

TORRES, C., LUJÁN À. H., BERTOLERO A., FERRANDIZ-ROVIRA M. (2017), Reducción de falanges en *Testudo hermanni* Gmelin, 1789, en una població del Delta del O Ebro, Cataluña, España. XXII Bienal de la Real Sociedad de Historia Natural, Coimbra, Portugal. September 6th – 9th, 2017 (Poster).

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VAN DER SANDE, M., BRUELHEIDE, H., DAWSON, W., DENGLER, J., ESSL, F., HAIDER, S., VAN KLEUNEN, M., KREFT, H., PERGL, J., PURSCHKE, O., PYŠEK, P., WEIGELT, P., WINTER, M., ATTORRE, F., AUBIN, I., BERGMEIER, E., CHYTRÝ, M., DAINESE, M., DE SANCTIS,

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VAYREDA J. (2017). El papel de los sistemas terrestres de Cataluña como reservorio y sumidero de carbono. Remedía V. 29-30 March, 2017. (Invited conference)

VERGER; M. WEISS; F. BARET; F. CAMACHO; J. SANCHEZ; R. LACAZE; B. SMETS (2017). Near real time and long term global monitoring of LAI, FAPAR and FCOVER from PROBA-V and VEGETATION at 300 m and 1 km. 9th International Workshop on the Analysis of Multitemporal Remote Sensing Images (MultiTemp), Bruges (Belgium), 27-29 June, 2017 (Oral communication).

VERRYCKT, L., STAHL, C., COSTE, S., ELLSWORTH, D., VERBRUGGEN, E., COURTOIS, E., URBINA, I., VICCA, S., PEÑUELAS, J., JANSSENS, I. (2017) Spatial variation of photosynthesis in tropical pristine forests: saplings vs. adults. 54th Annual Meeting of the Association of Tropical Biology and Conservation, Merida, Yucatan, Mexico. Alwyn Gentry Award for best student poster. July 9-14, 2017 (Poster)

VERRYCKT, L., VERBRUGGEN, E., STAHL, C., COURTOIS, E., JANSSENS, I., SABRINA, DAVID, OGAYA, R., LLUSIÀ, J., URBINA, I. PEÑUELAS, J. (2017) Spatial variation of photosynthesis in tropical pristine forests: saplings vs. adults. Session: 10. Inter and intraspecific trait differences in tropical ecosystems. European Conference for Tropical Ecology, Brussels, Belgium. 6-10 February, 2017 (Oral communication)

VICCA, S., PEÑUELAS, J., ET AL. (2017) The role of nutrient availability in forest carbon cycling - insights from global syntheses. Session: General Congress; Theme 5: Forests, Soil and Water Interactions; 41 - Forest rhizosphere ecology

and biogeochemistry across environmental gradients. IUFRO 125th Anniversary Congress 2017., Freiburg, Germany. 19-22 September, 2017 (Oral communication)

VIDAL-MACUA JJ., NINYEROLA M., ZABALA A., DOMINGO-MARIMON C., PONS X. (2017) Análisis de los factores que contribuyen a la transición de cubiertas arbustivas a forestales en el NE de la Península Ibérica (periodo 1987-2012). XXV Congreso de la AGE. Madrid (Spain), 25-27 October (Oral communication).

ZHANG, C. AND GLOBAL ECOLOGY UNIT CREAM-CSIC. (2017) Optical indices detecting photochemical efficiency under experimental drought and nutrient addition for Mediterranean trees. Imbalance-P conference (European Research Council Synergy grant ERC-2013-SyG-610028). Paris (France), 1-3 February, 2017 (Oral communication).

ZHU, Z.; PIAO, S.; MYNENI, R.; HUANG, M.; ZENG, Z.; CANADELL, J.; CIAIS, P.; SITCH, S.; FRIEDLINGSTEIN, P.; ARNETH, A.; CAO, C.; CHENG, L.; KATO, E.; KOVEN, C.; LI, Y.; LIAN, X.; LIU, Y.; LIU, R.; MAO, J.; PAN, Y.; PENG, S.; PEÑUELAS, J.; POULTER, B.; PUGH, T.; STOCKER, B.; VIOVY, N.; WANG, X.; WANG, Y.; XIAO, Z.; YANG, H.; ZAEHLE, S.; ZENG, N. (2017) Greening of the Earth and its drivers. 10th International Carbon Dioxide Conference. Interlaken, Switzerland. 21-25 August 2017 (Oral communication)

OUTREACH ANNEXES

OUTREACH CONFERENCES OR TECHNICAL SEMINARS

Member of the scientific committee of national and international conferences

Workshop on the Exposure Assessment Paradigm for non-Apis Bees

Place: Arlington, USA

Date: January 2017

CREAF membres in the scientific committee: J. Bosch

1st World Conference on Soil and Water Conservation under Global

Change-CONSOWA

Place: Lleida

Date: 12-16 June 2017

CREAF membres in the scientific committee: JM. Alcañiz

XIV MEDECOS & XIII AEET Meeting

Place: Seville (Spain)

Date: 31 January – 4 February 2017

CREAF membres in the scientific committee: F. Lloret

AGU Fall Meeting: Terrestrial ecosystems in a time of change, thresholds, tipping points, and critical transitions

Place: New Orleans, Louisiana.

Date: 11-15 December 2017

CREAF membres in the scientific committee: J. Peñuelas

IMBALANCE-P: Bayesian model workshop.

Place: Paris (France),

Date: 30 January, 2017.

CREAF membres in the scientific committee: J. Peñuelas

IMBALANCE-P: Workshop Theoretical Modelling.

Place: Paris (France),

Date: 30 January, 2017.

CREAF membres in the scientific committee: J. Peñuelas

IMBALANCE-P Conference.

Place: Paris (France),

Date: 30 January, 2017.

CREAF membres in the scientific committee: J. Peñuelas

Nature and society: synergies, conflicts, trade-offs.

Place: Ghent (Belgium),

Date: 2 - 4 May, 2017.

CREAF membres in the scientific committee: C. Basnou

FP7 EU project GREEN SURGE

Date: 2017

CREAF membres of the Scientific Advisory Board: C. Basnou

Nature and society: synergies, conflicts, trade-offs.

Place: Ghent (Belgium),

Date: 2 - 4 May, 2017.

CREAF membres in the scientific committee: J. Pino

Participation as co-organizer in other outreach conferences or technical seminars

EFUF Conference “Urban Forest Boundaries: Within, between and beyond the city”

Place: Barcelona

Date: May 31-June 2 July, 2017

CREAF membres involved as co-organizer: J. Pino

Activity title: annual meeting of the Ecometas network

Place: Farrera

Date: 7-9 June, 2017

CREAF membres involved as co-organizer: F Lloret, L Brotons, J Martínez-Vilalta, J Retana.

III Jornada científica del Departament de Biologia Animal, Biologia Vegetal i Ecologia de la Facultat de Biociències de la UAB

Place: Universitat Autònoma de Barcelona, Bellaterra

Date: 8 June, 2017.

CREAF membres involved as co-organizer: M. Ferrandiz

XIV Jornada d'Avenços en Ecologia. Societat Catalana de Biologia – CEAB –GECA.

Place: Blanes.

Date: 6 October, 2017.

CREAF membres involved as co-organizer: J. Catalan

Activity title: 11th GENERAL ASSEMBLY of the Mediterranean Network of Basin Organisations MENBO

Place: St. Julians, Malta

Date: 22, 23 and 24 March, 2017

CREAF membres involved as co-organizer: A. Sanchez and A. Broekman.

Activity title: BeWater River Basin Adaptation Conference

Place: Nova Gorica, Slovenia

Date: 7-8 March, 2017

CREAF membres involved in organising A. Sanchez

PRI, CCI and remote sensing of GPP

Place: BELSPO, Brussels

Date: March 12, 2017

CREAF membres involved: J. Peñuelas

Putting (more) ecology into ESM and IAM

Place: IIASA, Vienna

Date: March 28, 2017

CREAF membres involved: J. Peñuelas

Introducing plants and animals in earth systems models

Place: IIASA, Vienna

Date: March 29, 2017

CREAF membres involved: J. Peñuelas

Nutrient limitation carbon uptake by terrestrial ecosystems

Place: IIASA, Vienna

Date: March 30, 2017

CREAF membres involved: J. Peñuelas

Remote sensing of terrestrial ecosystems isoprenoid emissions: Flux tower measurements

Place: BELSPO Brussels

Date: April 6, 2017

CREAF membres involved: J. Peñuelas

Space for time in climatic and fertilization field experiments

Place: Parallel activity of AGU fall meeting. Hilton Riverside, New Orleans, Louisiana, New Orleans, Louisiana

Date: December 11, 2017

CREAF membres involved: J. Peñuelas

Participation as speaker in outreach conferences or technical seminars

BANQUÉ, M., VAYREDA J. (2017). Decaïment dels boscos de Catalunya: DEBOSCAT (Ponència per invitació). Jornada de Recerca i Coneixement en la Setmana de celebració del dia internacional dels boscos. Solsona, 21-25 March, 2017.

BROEKMAN A. AND SANCHEZ A. (2017). BeWater project results in Tordera. Local policy forum. Sant Celoni. 24 January 2017

BROEKMAN A. AND SANCHEZ A. (2017). Tordera's water: from research to management. Aula de Blanes Seminar. Blanes. 17 January 2017

CARABASSA V. (2017). Evaluación del proceso de restauración de espacios afectados por actividades extractivas a cielo abierto. VII Jornada sobre conservación y rehabilitación de suelos. Huesca. 22 May, 2017.

CATALAN, J. (2017). El cambio global a través del estudio de ecosistemas remotos. Universidad Pontificia Javeriana. Bogotá. Colombia. 26 October, 2017.

CATALAN, J. (2017). Margalef reloaded. Universidad Pontificia Javeriana. Bogotá. Colombia. 28 October, 2017.

CATALAN, J., TERRADAS, J. (2017). Taula rodona De la fertilitat a l'escalfament: ecología global seguint el sender marcat per Ramon Margalef. Faculty of Biology University of Barcelona Novembre 7th, 2017

CLARAMUNT B. (2017). NEMOR Network for European Mountain Reserach. Networks, research and innovation for mountains. Milano, Italy, 11-12 Desembre 2017.

DOBLAS-MIRANDA E. (2017), Focus Group Forest practices and climate change. Taller sobre innovación en los sectores agrario y forestal: Difusión de los trabajos de los Focus Groups (FG) EIP Agri. Dirección General de Desarrollo Rural y Política Forestal, Madrid, 29th September 2017.

LLORET, F. (2017). Bases ecológicas de la gestión forestal mediterránea en un contexto

de cambio global. Seminario "Qué haremos con nuestros bosques? Perspectivas de futuro y retos en la conservación de los bosques mediterráneos. Proyecto LIFE "Redes de conocimiento y capacitación para la gestión eficaz de hábitats forestales mediterráneos de la Red Natura 2000" (CE). Universidad Autonoma de Madrid, 16 February, 2017.

LLORET, F. (2017). Com afecta el canvi climàtic la biodiversitat? (invited) Cicle de conferències Visions de la ciencia. L'impacte del canvi climàtic a Catalunya. Biblioteca Vila de Gràcia, Barcelona, 20 February, 2017.

LLUSIÀ, J., PEÑUELAS, J. ET AL. (2017). Sistemes naturals: impactes, vulnerabilitat i adaptació: Ecosistemes terrestres. Jornada II: Canvi climàtic: impactes, vulnerabilitat i adaptació, Sant Cugat del Vallès, 9 November, 2017.

MARTÍNEZ-VILALTA J (2017). L'estructura dels arbres. Cafè Científic Casa Orlandai,

PEÑUELAS, J. (2017). Ecología de los bosques tropicales. Ikiam, Tena, February 26th, 2017.

PEÑUELAS, J. (2017). Estem canviant de període ecológic?, Patronat d'Estudis Osonencs, Temple Romà de Vic, Vic; October 28, 2017.

PÉREZ-NAVARRO M.A. (2017). Vulnerabilidad del matorral mediterráneo a la sequía extrema: una aproximación desde el nicho climático de las especies. Seminarios de Biodiversidad y Gestión Ambiental. Murcia. 10 de Marzo de 2017.

PINO J. (2017). Ecological value of metropolitan forests: the case of Barcelona. EFUF Conference, Barcelona, May 2017.

PLA E., BROEKMAN A. AND SANCHEZ A. (2017). BeWater: Lessons learned co-creating River Basin Adaptation Plans. V Mediterranean Forest Week. Agadir, Morocco. 20, 21, 22, 23 and 24 March 2017.

PLA E., BROEKMAN A. AND SANCHEZ A. PASCUAL D. (2017). Experiences on adaptation to global change in three river basins in Catalonia: the

case of LIFE+ MEDACC project (2013-2018). River Basin Adaptation Conference. Nova Gorica, Slovenia. 7-8 March 2017.

POYATOS, R. (2017) La vegetació i el cicle de l'aigua: una relació d'anada i tornada. La recerca en primera persona, Dia de la Ciència a les Escoles 2017. Col·legi Sant Gabriel, Sant Adrià de Besòs, Barcelona. 15th November 2017.

PRICE M, CLARAMUNT B. (2017) A new European Mountain Research Network: how to organise it?. Euromontana General Assembly. Brussels, Belgium, 18 October, 2017.

SANCHEZ A. (2017). BeWater Making society an active participant in water adaptation to global change. River Basin Adaptation Conference. Nova Gorica, Slovenia. 7-8 March 2017.

SANCHEZ A. (2017). BeWater: Making society an active participant of water adaptation to global change. Concertation Workshop. Brussels. 1-2 March 2017

SANCHEZ A. (2017). BeWater: Making society an active participant of water adaptation to global change. European Policy Forum. Brussels. 9 February 2017

SANCHEZ A. (2017). The BeWater project in the Tordera River Basin: an interpretation of results. River Basin Adaptation Conference. Nova Gorica, Slovenia. 7-8 March 2017.

SGOLASTRA F, PORRINI C, MEDRZYCKI P, MAINI S, BOSCH J. (2017). Mixing drinks: effects of neonicotinoid and fungicide cocktails on bees. Neonicotinoids: Is a Total Ban in Sight? European Parliament. Brussels. November.

TERRADAS J. (2017). Taula de metabolisme urbà i serveis: reptes i objectius. Taules temàtiques de la redacció del Pla Direccional d'Urbanisme. Àrea Metropolitana de Barcelona, Barcelona, February 15th 2017

TERRADAS, J. (2017). Introduction of Dr. Josep Peñuelas achievements. Ramon Margalef Ecology Award, Pla de

la Generalitat de Catalunya, Barcelona, Novembre 6th 2017

TERRADAS, J., T. FRANQUESA, M.J. PICÓ. (2017). Reflexions sobre el futur de l'educació ambiental a Catalunya. Educació ambiental: d'on venim, cap on anem? Diputació de Barcelona. Espai Françoise Bonnemaïson, Barcelona, June 8th 2017.

VAYREDA J. (2017) Adaptació i mitigació dels boscos mediterranis enfront del canvi climàtic: presentifutur (Ponència per invitació). III Jornades Científiques del Parc Natural del Carrascol de la Font Roja. Alcoi. 3-5 November, 2017.

VAYREDA J. (2017). Bosques maduros desde una perspectiva ecológica. Dimensión espacio-temporal de los procesos y funciones (Ponencia invitada). Seminario: Gestión de bosques mediterráneos en áreas protegidas (I). Identificación y gestión de rodales maduros. Parc Natural dels Ports, 22-24 November, 2017

VAYREDA. J. (2017). Els Boscos i el Canvi Global: impactes, adaptació i mitigació (Ponència per invitació). Jornada de Recerca i Coneixement en la Setmana de celebració del dia internacional dels boscos. Solsona, 21-25 March, 2017.

Policy Briefs, Standards and Reports

AVILA, A. (2017) Assessorament Directiva Habitats. Encàrrec de redacció de fitxes per a la identificació i classificació de les pressions i amenaces als hàbitats de la Directiva deguts a la contaminació atmosfèrica: deposició àcida,

deposició de N, i ozò. Febrer- juny 2017. (6 fitxes en total). Encàrrec de TRAGSATEC-AEET.

AVILA, A. (2017) Informe sobre el quimisme de la pluja recollida per la Xarxa de Prevenció i Vigilància de la Pluja Àcida resultats Any 2016. Encàrrec de la Direcció General de Qualitat Ambiental. Departament de Territori i Sostenibilitat. Generalitat de Catalunya -

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GUERRIERI R., PEÑUELAS J, MENCUCINI M (2017). Nitrification in tree canopies. In: Seidling, W., (ed.): Forest Conditions, ICP Forests Executive Report 2017. UNECE, PCC of ICP Forests, Eberswalde, <p. 7-9>.

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Outreach publications

AVILA A. (2017) Deposició seca i humida en dos regions de contrastada influencia africana. UAB Divulga.

AVILA A. (2017) Determinació del nivell crític de contaminació per amoni en una zona ramadera de Catalunya. UAB Divulga

BROTONS, L. (2017) El bosque responde con fuego. Secció Opinió. El Periódico.

COUTO V. (2017). "Encara costa que s'insereixi l'educació ambiental a les escoles" Jaume Terradas a la Betevé. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Anselm Rodrigo explica el problema dels neonicotinoides i les abelles a la Betevé. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Arriba Sant Jordi i les nostres recomanacions literàries! CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Barcelona sets an example for management of green space and air quality. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Bee decline is a fact. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Canviarà la vegetació de tot el món amb l'augment de sequera? CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Coneix les sis noves iniciatives que poden millorar la gestió del medi natural. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). CREAM establishes connections in Africa in the field of water management. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). CREAM participates in the global initiative GEO WEEK in Washington DC. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). co-published a book about adapting the Mediterranean basin to climate change. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). El BeWater publica una guia sobre la gestió participativa de les conques hidrogràfiques. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). El canvi climàtic augura un clima més sec i càlid per a Catalunya, sobretot a les muntanyes. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). El saltamartí més gran d'Europa es pot trobar a Catalunya. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Els drons permeten estudiar el comportament de les aus. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Jaume Terradas participa en els 40 anys de l'educació ambiental. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Jaume Terradas participa en un capítol del llibre 'Educació ambiental' de la Diputació de Barcelona. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Joan Pino analitza les principals espècies invasores de Collserola a la Betevé. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Joan Pino explica a 'Els matins de TV3' l'estat actual de la invasió de la vespa asiàtica. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). L'ARA mostra la recuperació d'un bosc afectat per processonària amb imatges del dron d'en Brotons. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). L'expedició científica d'EarthWatch que organitza en Bernat Claramunt es manté al Top 10 de les

millors. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). La revista Nature busca els millors mentors científics d'Espanya. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Quin és l'estat dels boscos catalans? Mireia Banqué respon a Betevé Radio. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Scant dwelling options cause the dormouse to raise a larger number of males. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Sergio Osorio defends his doctoral thesis and shows that the rules of ecology can still be revised. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). The adventures of nest-making solitary bees. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). The lack of management in Mediterranean forests is accelerating substitutions of pine with holm oak. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Trees with soft wood and thin leaves die of thirst more easily. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). We invest much more time writing scientific publications than making science accessible. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). Wildfires can favor the diversity of flora and fauna. CREAM BLOG ISSN 2385-7234

COUTO V. (2017). You only really understand your research if you are able to explain it to a

child. CREAM BLOG ISSN 2385-7234

DIAZ, M., GARRIDO M, LLORET F, VALLADARES F, VELAZQUEZ E, VIETES D (2107) Menos ciencia pública en los planes del Gobierno. Diario El País.

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GUZMÁN P. (2017). Barcelona, Madrid, Sevilla i Cadis competiran en un concurs internacional d'observacions naturalistes'. CREAM BLOG ISSN 2385-7234

GUZMÁN P. (2017). Daniel Sol parla de com la urbanització fa davallar les poblacions d'ocells a 'Muy Interesante'. CREAM BLOG ISSN 2385-7234

GUZMÁN P. (2017). Les vinyes ecològiques tenen més biodiversitat que les convencionals. CREAM BLOG ISSN 2385-7234

GUZMÁN P. (2017). Resum de la jornada 'Ús històric dels boscos a Catalunya i el seu significat davant els reptes del futur'. CREAM BLOG ISSN 2385-7234

LLORET F. (2017). 'Big data': el detall infinitesimal d'un número gairebé infinit de casos. CREAM BLOG ISSN 2385-7234

LLORET F. (2017). Aquesta pel·lícula viscosa que envolta la Terra. CREAM BLOG ISSN 2385-7234

LLORET F. (2017). El 'Lego' de les plantes. CREAM BLOG ISSN 2385-7234

LLORET F. (2017). El destí dels boscos: guanyar temps. CREAM BLOG ISSN 2385-7234

LLORET F. (2017). Els boscos al seu laberint: gestió forestal i conservació de la biodiversitat. CREAM BLOG ISSN 2385-7234

LLORET F. (2017). Incendis forestals: aprenent de la bèstia. CREAM BLOG ISSN 2385-7234

LLORET F. (2017). Pastors d'arbres. CREAM BLOG ISSN 2385-7234

LLORET F. (2017). Woodlands in their labyrinth: forest management and biodiversity conservation. CREAM BLOG ISSN 2385-7234

MARTÍNEZ-VILALTA J (2017) Com el creixement dels arbres ens pot ajudar a predir la seva mort. UABdivulga

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MARTÍNEZ-VILALTA J, COSTA-SAURA J (2017) Els trets funcionals de les plantes, una eina per entendre i predir la seva distribució. UABdivulga

MARTÍNEZ-VILALTA J, GARCIA-FORNER N (2017) De què moren les plantes quan hi ha sequera? UABdivulga

MARTÍNEZ-VILALTA J, LLORET F (2017) L'augment en la sequera està produint canvis de vegetació a escala global? UABdivulga

MARTÍNEZ-VILALTA J, SALA A, LLORET F (2017) Per què rebroten les plantes? UABdivulga

MARTÍNEZ-VILALTA, J, LLORET, F (2017) L'augment en la sequera està produint canvis de vegetació a escala global? UABdivulga

MARTÍNEZ-VILALTA, J, SALA, A, LLORET, F (2017) Per què rebroten les plantes? L'alzina podria perdre la seva hegemonia en el bosc mediterrani a causa del canvi climàtic. UABdivulga

NAYA I DÍAZ A. (2017). Achieving the COP21 agreements is currently far-fetched. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Annelies Broekman explica a Ràdio Tordera què ha fet el BeWater a la conca. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Científics i ciutadania acorden 33 accions per adaptar la conca de la Tordera al canvi climàtic. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Climate change is already threatening the Mediterranean ecosystems of Catalonia. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Comença el Fòrum Europeu sobre Boscos Urbans a Barcelona. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). CREAM Annual Report 2016 is already available. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). CREAM will help European forestry adapt to climate change. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Daniel Sol valora l'aprenentatge dels cérvols contra els caçadors en un article a 'The New York Times'. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Do drought-affected trees die of thirst or hunger? CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). El camí cap a una societat sostenible amb el medi. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). El CREAM presenta el projecte LIFE The Green Link a la conferència internacional CONSOWA2017. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). El CREAM rep el Premi Col·lectiu UAB. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). El cultiu conjunt de quatre farratgeres afavoreix la supressió de males herbes. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). El projecte REPLIM segueix de ben a prop els llacs i torberes del Pirineu. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Els boscos catalans i canadencs ara més a prop. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Els focs s'apaguen a l'hivern. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). En David Agudé explica la seva tesi sobre mortalitat per sequera en pi roig. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). En Jordi Vayreda explica a 'El món a RAC1' la situació de la processonària. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). En Josep Peñuelas explica el moviment en massa dels bacteris, a 'La Contra'. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Es presenta el llibre 'Catalunya i futur'. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). For the time being, forests are helping to slow CO2 accumulation and climate change. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Greenpeace UK alerta de la toxicitat dels insecticides per als pol·linitzadors. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). How the forests of the Iberian Peninsula have changed over 25 years? CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Jordi Catalan coedita un llibre sobre la conservació de l'alta muntanya. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Jordi Vayreda explica el canvi que pateixen els boscos a TVE. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Josep Peñuelas a 'La nit dels Ignorants 2.0'. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Josep Peñuelas apareix a la llista de científics més influents del món. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Josep Peñuelas escriu a La Vanguardia sobre la capacitat de la Terra. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). L'escalfament de l'aigua del mar afecta el déntol de les Medes. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). L'ISACC TorDelta facilitarà l'adaptació al canvi global del Delta de la Tordera. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). La sequera estival de 2016 afecta un 2,2% dels boscos catalans. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Natusfera celebra un any! CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Nous incendis i canvi climàtic al 'Big Vang'. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Noves formes per trobar nous usos a les plantes tradicionals. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Phosphorus, once only a nutrient, has become a contaminant on a global scale. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Què és i com es gestiona un bosc madur? Trobada al PN dels Ports. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Remote sensing of leaf pigments will improve climate change models. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Rising temperatures threaten global agricultural production. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Teresa Rosas guanya el premi a millor pòster en el 39è Simposi de 'New Phytologist'. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). The 'Tinder' of the forestry and environment sectors. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). The greening of the earth is reaching its limit. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). The MENFRI project thrust forward a new approach in innovative research and sustainable

development. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Troben als Pirineus un bolet en perill d'extinció. CREAM BLOG ISSN 2385-7234

NAYA I DÍAZ A. (2017). Un article de Josep Peñuelas és el 9è amb més presència als mitjans el 2016. CREAM BLOG ISSN 2385-7234

ORDÓÑEZ J.L. (2017). Ajuda'ns a recollir dades sobre la processonària. CREAM BLOG ISSN 2385-7234

ORDÓÑEZ J.L. (2017). Per què rebroten les plantes? CREAM BLOG ISSN 2385-7234

ORDÓÑEZ J.L. (2017). The loss of predators can reduce the diversity of prey. CREAM BLOG ISSN 2385-7234

RAMON A. (2017). Cities threaten millions of years of bird evolution. CREAM BLOG ISSN 2385-7234

RAMON A. (2017). Connectant les persones amb la naturalesa. CREAM BLOG ISSN 2385-7234

RAMON A. (2017). Earth observation can help conserve protected natural areas. CREAM BLOG ISSN 2385-7234

RAMON A. (2017). El CREAM busca històries personals que tinguin el bosc com a escenari. CREAM BLOG ISSN 2385-7234

RAMON A. (2017). El CREAM i la UAB guanyen el segon lloc d'una Hackaton promoguda per INSPIRE. CREAM BLOG ISSN 2385-7234

RAMON A. (2017). Humans are causing mass movements of bacteria around the world. CREAM BLOG ISSN 2385-7234

RAMON A. (2017). La Fundació Bancària "la Caixa", el CREAM i l'ICTA presenten l'estudi pioner 'Boscós sans per a una societat saludable'. CREAM BLOG ISSN 2385-7234

RAMON A. (2017). Men from wealthy countries are getting taller because their diet is rich in nitrogen and phosphorus. CREAM BLOG ISSN 2385-7234

RAMON A. (2017). MiraMon is now free to the international education community. CREAM BLOG ISSN 2385-7234

RAMON A. (2017). Resum de la jornada "Invasions biològiques: punt de trobada entre recerca i gestió". CREAM BLOG ISSN 2385-7234

SANCHEZ A., BROEKMAN A. (2017) Science and Society working together. The significance of stakeholder involvement in adaptive water management strategies. IMPACT Magazine.

TERRADAS J. (2017). A dangerous metabolism: future remedies against CO2 increase?. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). En record de Maria Rosa Miracle. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). Geobotany and plant ecophysiology in Europe: some masters. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). Mor Pere Montserrat. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). On paintings and books. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). Origins of terrestrial ecology in Catalonia. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). Russian Revolution and environment. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). Social conflicts and environmental disasters in novels, songs and movies. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). Sustainability thinking. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). The Deep Ecology. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). Thinking on group selection. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). Towards a general theory of evolution. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). Why are there so many plants? CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). Carlos Herrera, prize Haeckel, Joan Martínez Alier, Leontief Prize. CREAM BLOG ISSN 2385-7234

TERRADAS J. (2017). The Roots of Heaven: Literature and Ecology. CREAM BLOG ISSN 2385-7234

TORRES M. (2017). 5 de cada 1.000 cotxes que circulen diàriament durant l'estiu per l'Àrea Metropolitana de Barcelona transporten un mosquit tigre. CREAM BLOG ISSN 2385-7234

TORRES M. (2017). Citizen science is a useful and reliable tool for studying the mosquitoes driving global epidemics. CREAM BLOG ISSN 2385-7234

TORRES M. (2017). La lluita contra el mosquit tigre arriba a les escoles de diverses províncies espanyoles. CREAM BLOG ISSN

2385-7234

TORRES M. (2017). Pioneering UN backed, citizen led alliance against mosquito borne diseases joins global fight to save 2.7 Million lives every year. CREAM BLOG ISSN 2385-7234

TRAINING ANNEXES

MASTERS PROVIDED BY CREAF

OFFICIAL MASTER IN REMOTE SENSING AND GIS

The aim of this master is to provide sound scientific training in techniques for observing the Earth and for generating and analyzing information in order to be able to study a given territory and manage its resources using GIS. The program is divided into 7 modules: 4 modules of mandatory subjects and 2 modules of elective advanced subjects. In addition, the master is complemented by practical sessions with a tutor and a Final Project as the last mandatory module of the program. Coordinator: Xavier Pons. Coordinator assistant: Cristina Cea Lecturers: Joan Bech, Antoni Broquetas, Jaume Calvet, Adriano Camps, Cristina Cea, Bernat Codina, Carles Dalmasas, Ricardo DíazDelgado, Josep A. Gili, Sergi Gumà, Jordi Isern, Agustín Lobo, Arnald Marcer, Joan Masó, Eduardo de Miguel, Maria Mira, Gerard Moré, Òscar Mora, Javier Muñoz, Miquel Ninyerola, Fernando Pérez, Lluís Pesquer, Joan Pino, Xavier Pons, Càrol Puig, Pere Serra, Jordi Vayreda, Alaitz Zabala.

OFFICIAL MASTER IN TERRESTRIAL ECOLOGY AND BIODIVERSITY MANAGEMENT

This master in Terrestrial Ecology and Biodiversity Management is addressed to students interested in the processes involved in the functioning of terrestrial ecosystems and the options for mitigating their future deterioration in a context of global environmental change, and also to students interested in the management and

conservation of biological natural resources (flora and fauna). The master takes up one academic year and is divided into 2 specialisations: Terrestrial Ecology and Management and Diversity of Fauna and Flora (marine and terrestrial). Master in Terrestrial Ecology and Biodiversity. Coordinator: Francisco Lloret. Directors: Francisco Lloret, Anna Morton. Lecturers: Josep Maria Alcañiz, Pilar Andrés, Anna Àvila, Carme Biel, Jordi Bosch, Lluís Brotons, Juan Antonio Calleja, Eva Castells, Maite Carrasón, Jordi Catalan, Bernat Claramunt, Lluís Coll, Maria Constenla, Xavier Domene, Josep Maria Espelta, Marc Estiarte, Iolanda Filella, Mercè Galvany, Fernando García, Carles Gracia, Marc Gràcia, Iñigo Granzow, Laia Guàrdia, Santiago Lavin, Concepción de Linares, Francisco Lloret, Joan Llusà, Manel López Bejar, Javier López, Jordi López Olvera, Ignasi Marco, Jordi Martínez-Vilalta, Joan Masó, Maria Mayol, Maurizio Mencuccini, Ana Morton, Francesc Muñoz, Miquel Ninyerola, Romà Ogaya, Josep Peñuelas, Ramon Pérez, Joan Pino, Josep Piñol, Eduard Pla, Rafael Poyatos, Javier Retana, Miquel Riba, Àngela Ribas, Anselm Rodrigo, Santiago Sabaté, Llorenç Sáez, Sergi Santamaria, Jordi Sardans, Sandra Saura, Robert Savé, Emmanuel Serrano, Daniel Sol, Anna Soler, Constantí Stefanescu, Jaume Terradas, Emilio Valbuena, Jordi Vayreda.

SUBJECTS IN OTHER MASTERS AND POSTGRADUATE COURSES

Ecologia del sòl. Màster Oficial Interuniversitari en Gestió de Sòls i Aigües (MAGSA), UdL, UB, UAB, UPN, Lleida, Febrer 2017. Professor: Xavier Domene i Rosa Cañizares

Processos de degradació i rehabilitació de sòls. Màster Oficial Interuniversitari en Gestió de Sòls i Aigües (MAGSA), UdL, UB, UAB, UPN, Lleida, Gener 2017, Professor: Josep M. Alcañiz.

Riscos geològics i restauració ambiental. Màster Oficial Interuniversitari en Gestió de Sòls i Aigües (MAGSA), UdL, UB, UAB, UPN, Lleida, Abril 2017, Professors: Rogelio Linares i Josep M. Alcañiz.

Laboratorio de instrumentación. Máster Oficial en Teledetección. Universitat de València, Burjassot. 2017. Professor: Aleixandre Verger

Aplicaciones de Teledetección. Máster Oficial en Teledetección. Universitat de València, Burjassot. 2017. Professor: Aleixandre Verger

Régimen de perturbaciones y gestión forestal en espacios naturales protegidos. Gestión de ecosistemas. Master en Espacios Naturales Protegidos, UCLM-UAM-Fundación González Bernáldez. Universidad Autónoma de Madrid. 2017. Professor: Josep Maria Espelta

Science with and for Society: BeWater project. Master in Interdisciplinary Studies in Environmental, Economic and Social Sustainability. ICTA, UAB. Bellaterra. 2017. Professor: Anabel Sánchez.

Fonaments de biologia – Ecologia. Màster de formació inicial del professorat de secundària. Universitat Autònoma de Barcelona. 2018. Professor: Sandra Saura-Mas

COURSES WITHIN MASTERS, SUMMER SCHOOLS, CONGRESS.

Course Applying Science to Society (course). PhD in Terrestrial Ecology. Universitat Autònoma de Barcelona, 4 May to 1 June, 2017. CREAM members involved in organising: Anna Avila

Impactos de la sequía en los bosques: de la mortalidad forestal a los servicios ecosistémicos (course). Cursos de Verano El Escorial 2017: Cambio climático y bienestar humano en la era del Antropoceno. San Lorenzo del Escorial, 10-12 July, 2017. CREAM members involved in organising: Jordi Martínez-Vilalta.

El cambio global a través de los indicadores algales (course). Universidad del Valle, Cali, Colombia. XI Congreso de Ficología de Latinoamérica y el Caribe. 2-4 November, 2017. CREAM members involved in: Jordi Catalan.

El cambio global a través de indicadores limnológicos (course). Universidad Nacional de Colombia – Sede Amazonía. Leticia, Colombia. 14-17 November, 2017. CREAM members involved in: Jordi Catalan.

SCIENTIFIC SEMINARS

GUERRIERI R (2017). A novel approach to determine canopy nitrification in the Phyllosphere of European forests: combining multiple isotope tracers and proteogenomic techniques. Spanish-Portuguese Chapter Meeting of the Marie Curie Alumni Association, Salamanca, 25 March, 2017.

GUERRIERI R (2017). Linking carbon, water and nitrogen cycling in forests: from microbes to ecosystem. Invited by Dr. Lisa Wingate. INRA, Bordeaux, 27 October, 2017.

GUERRIERI R (2017). Linking carbon, water and nitrogen cycling in forests: from microbes to ecosystem. Invited by Prof. Michalski. Purdue University, Lafayette, USA, 29 December, 2017.

GUERRIERI R (2017). Reconstructing and tracing changes in carbon, water and nitrogen cycling in forests by using stable isotopes. Invited key lecture. I ISONET workshop, San José, Costa Rica, 2-6 October 2017.

LLORET, F. (2017). Species climatic niche and drought-induced vegetation die-off. School of Agricultural, Forestry and Environmental Sciences, Università degli Studi della Basilicata, Potenza, Italia, 16 October, 2017.

MENCUCCINI M., (2017) Water use strategies by woody plants. Safety, efficiency and whole-plant economics. Invited Seminar, Geography (Exeter, UK), Mar 15, 2017.

MENCUCCINI M., (2017) Water use strategies by woody plants. Safety, efficiency and whole-plant economics. Invited Seminar, School of Geography (Leeds, UK), Mar 13, 2017.

MENCUCCINI M., (2017) Water use strategies by woody plants. Safety, efficiency and whole-plant economics. Invited Seminar, School of Geography (Oxford, UK), Apr 28, 2017.

PEÑUELAS J. (2017) Biogeochemical niche (seminar). Université Paul-Valéry, Montpellier III, Montpellier, France. November 3, 2017.

PEÑUELAS J. (2017) Carbon cycle and nutrients (seminar). University of Berkeley. June 6th, 2017.

PEÑUELAS J. (2017) Ecologia dels contaminants emergent (seminar). Universitat Politècnica de Catalunya. July 14th, 2017.

PEÑUELAS J. (2017) Etnobotánica, filogenia y biodiversidad (seminar). Universidad de Flacso, Ecuador. February 24th, 2017.

PEÑUELAS J. (2017) Global ecology mainstream issues (seminar). University of Stanford. June 5th, 2017.

PEÑUELAS J. (2017) Instalación de parcelas de seguimiento ecológico en la reserva de Colonso y en Ikiam: aplicaciones a la ecología global y a la ecología de la conservación (seminar). Ikiam Universidad Regional Amazónica, Ecuador. March 3th, 2017.

PEÑUELAS J. (2017) Introducing ecology into Earth System Models (seminar). University of Princeton. March 22nd, 2017.

PEÑUELAS J. (2017) Phenology and modelling of climate change. University of Princeton. March 24th, 2017.

PEÑUELAS J. (2017) Reflectance and fluorescence, how to they can be used for assessing ecosystem functioning (seminar). CREAM, UAB. October 5th, 2017.

PEÑUELAS J. (2017) Remote sensing of photosynthesis (seminar). Berkeley, University of Berkeley. June 2nd, 2017.

PEÑUELAS J. (2017) Seguimiento de los cambios ecológicos en los bosques tropicales en el marco del cambio global (seminar). Ikiam Universidad Regional Amazónica, Ecuador. March 1st, 2017.

PEÑUELAS J. (2017) Shifting from fertilization to warming in the Anthropocene (seminar). Spring seminar series, University of Princeton. March 23th, 2017.

PEÑUELAS J. (2017) Window of opportunities opened by SMOS in assessment of both plant water content and woody biomass (seminar). GFZ German Research Centre for Geosciences, Free University of Berlin, Berlin, Germany. October 24th, 2017.

PÉREZ NAVARRO MA. (2017) Modelización de Nicho Ecológico (seminar). CREAM, UAB, Bellaterra. 2017.

POYATOS, R. (2017) SAPFLUXNET: Compiling sap flow data from around the world to unravel how plants regulate transpiration. Seminar at the Faculty of Bioscience Engineering, Ghent University, Ghent, Belgium. 1st September 2017.

TERRADAS J. (2017) Environmental education (seminar). PhD in Terrestrial Ecology. UAB-CREAF. May 2017.

TERRADAS, J. (2017) Urban Ecology. PhD in Terrestrial Ecology program seminar. UAB-CREAF. May 2017.

FINAL MASTER PROJECT (DIPLOMA D'ESTUDIS AVANÇATS)

ANGULO A. (2017). Tree seedling responses to changes in temperature, nutrient availability and shrub cover at the Pyrenean treeline after 10 years of experimental manipulations. Màster en Ecologia Terrestre i Gestió de la Biodiversitat. Universitat Autònoma de Barcelona. Supervised by O. Grau and J. Peñuelas.

BALLESTEROS X. (2017). Study of habitat preference of Iberian populations of edible dormouse situated in the edge of their distribution. Master in Ecologia Terrestre i Gestió de la Biodiversitat, Universitat Autònoma de Barcelona. Supervised by M. Ferrandiz-Rovira.

BASSOLS J. (2017) Modelling the dynamics of oak-pine Mediterranean forests in a climate change scenario. Màster en Ecologia Terrestre i Gestió de la Biodiversitat. Universitat Autònoma de Barcelona. Supervised by J. Martínez-Vilalta & R. García-Valdés.

BOET, O. (2017) The role of environmental filtering vs. biotic competition in the structure of European ant communities depending on spatial scale, environmental conditions and type of functional traits. Màster en Ecologia Terrestre i Gestió de la Biodiversitat. Universitat Autònoma de Barcelona. Supervised by J. Retana and X. Arnan.

DÍAZ GARCÍA E. (2017) Mediterranean forest rehabilitation: Assessment of two innovative methods for enhancing land rehabilitation while promoting sustainable use and management of degraded Mediterranean landscapes. MSc Forest and Nature Conservation. Wageningen University, Supervised by JM. Alcañiz

FEDELMAN M. (2017). Consistency in seed predation and dispersal behavior of wood mice under predation risk: do boldness matter. Master in Ecologia, Gestió i restauració del Medi Natural, Universitat de Barcelona. Supervised by M. Ferrandiz-Rovira.

HIDALGOR.(2017).Diferenciascomportamentales entre individuos de Apodemus sylvaticus en presencia o ausencia de depredador. Master in Biodiversitat, Universitat de Barcelona. Supervised by M. Ferrandiz-Rovira.

IZQUIERDO S. Three-year variation in the flower-pollinator network of a rupicolous plant-community (2017). Màster en Ecologia Terrestre i Gestió de la Biodiversitat. Universitat Autònoma de Barcelona Supervised by L. Navarro.

LONIGHI-ITURBIDE A. (2017) Seasonal variation in floral resources and their potential consequences on plant-pollinator network structure. Màster en Ecologia Terrestre i Gestió de la Biodiversitat. Universitat Autònoma de Barcelona. Supervised by J. Bosch i A. Rodrigo

ROZAS J (2017). Analysis of the movement patterns of a social species, the Alpine marmot (*Marmota marmota*). Màster en Ecologia Terrestre i Gestió de la Biodiversitat. Universitat Autònoma de Barcelona. Supervised by B. Claramunt & F. Bartumeus

RODRÍGUEZ-GRANJEL R. (2017). Effects of temperature, moisture and soil biota on carbon transformations in peatland ecosystem. Master in Terrestrial Ecology and Biodiversity Management. Universitat Autònoma de Barcelona. Supervised by J. Piñol.

SABATER-BLASCO, A.M. (2017). Transpiration from subarctic deciduous woodlands with contrasting stand structure: environmental controls and contribution to ecosystem evapotranspiration. Màster en Ecologia Terrestre i Gestió de la Biodiversitat, Universitat Autònoma de Barcelona. Supervised by: Rafael Poyatos and Maurizio Mencuccini.

SÁNCHEZ A. (2017) Evaluation of the inclusion of adaptation to climate change in water planning: application to the Tordera River Basin. Master in Sustainable Water Management. Universidad de Zaragoza. Supervised by P. Paneque and M. Feijóo.

SERRA X. (2017) Generalized decline in tree resilience to drought in three dominant pine species in NE Iberian Peninsula. Màster en Ecologia Terrestre i Gestió de la Biodiversitat. Universitat Autònoma de Barcelona. Supervised by J. Martínez-Vilalta and M. Mencuccini.

TRIGGIANESE S (2017) Análisis SIG de la demanda de transporte en autobús del área metropolitana de Barcelona (AMB) con variables socioeconómicas. Master Remote Sensing and GIS. Universitat Autònoma de Barcelona. Supervised by Ll. Pesquer.

VIDAL J. (2017) Fire and herbivory responses of herbaceous facultative resprouter species and its relation to the biogeographical region of the individuals. Màster en Ecologia Terrestre i Gestió de la Biodiversitat. Universitat Autònoma de Barcelona. Supervised by S. Saura-Mas and E. Castells.

FINAL STUDENT WORK (PROJECTE FINAL DE CARRERA)

MARRAFA, S. (2017). Remote Sensing of cork oak in Portugal. Universitat Autònoma de Barcelona. Supervised by J. Peñuelas & M. Fernández-Martínez

ANGELATS D. (2017) Anàlisi espacial de la distribució de la processonària del pi (*Thaumetopoea pityocampa*) a Catalunya en el període 2007-2016. Grau d'Estadística Aplicada, Universitat Autònoma de Barcelona. Supervised by J. Martínez-Vilalta & A. Alejandra Cabaña.

BOLDÚ, A. (2017). Ecología y urbanización en Barcelona. Biología Ambiental. Universitat of Barcelona Supervised by

TORRES C. (2017) Reducció de falanges en *Testudo hermanni* Gmelin, 1789 del Delta de l'Ebre: mode de vida o estratègia de reproducció. Grau de Biologia, Universitat Autònoma de Barcelona. Supervised by M. Ferrandiz-Rovira and À.H. Luján.

BASCOMPTE, J. (2017) Ecologia termal en la població de *Testudo hermanni* Gmelin, 1789 del Delta de l'Ebre (Catalunya, Espanya). Grau de Biologia, Universitat Autònoma de Barcelona). Supervised by M. Ferrandiz-Rovira and À.H. Luján.

AWARDS

Awards and distinctions received by members of CREAM

ALBERT ALVAREZ NEBOT. Premi Extraordinari de Doctorat dins el Doctorat de Diversitat i Funció d'Ecosistemes Mediterranis. 2017

Enrique Doblas, Member of the EIP-AGRI focus group New forest practices and tools for adaptation and mitigation of climate change. 2017

JOAN MASÇO, INPIRE hackathon second prize for the integration of the: Geospatial User Feedback system in a mirror of the INSPIRE discovery portal (TEAM 8). 2017

JOSEP PEÑUELAS, Elected chair of the panel of judges for the Nature's awards for scientific mentoring. 2017

JOSEP PEÑUELAS, The paper: European phenological response to climate change matches the warming pattern (Global Change Biology 12: 1969-1976) is a classic paper in Environmental Sciences according to Google Scholar). Classic papers are highly-cited papers in their area of research that have stood the test of time. For each area, Google Scholar list the ten most-cited articles that were published ten years earlier.

JOSEP PEÑUELAS, Named member of the Assessing Scientific Committee of the Fundacion Gadea Ciencia. 2017

JOSEP PEÑUELAS, Named Highly Cited Scientist by Thomson Reuters. 2017

TERESA ROSAS. First prize at the 39th New Phytologist Symposium (Trait covariation: Structural and functional relationships in plant ecology) for the poster 'Whole-plant hydraulics are decoupled from the leaf economics spectrum'. Exeter, UK, 27.29 June 2017.

ACTIVE PROJECTS IN 2017

PROJECT NAME	ACRONYM	Principal investigator	Budget	Entity	Period
Análisis del Cambio Global en la Península Ibérica: Un laboratorio integrado del clima y las cubiertas del suelo 1950-2030	ACAPI	Xavier Pons	118.580,00 €	Ministerio de Economía y Competitividad	2016-2018
Making society an active participant in water adaptation to global change	BEWATER	Javier Retana	2.934.724,00 €	EU	2013-2017
Bioclimatic niche and plant community dynamics in response to climate change	BIOCLIM	Francisco Lloret	193.600,00 €	Ministerio Economía y Competitividad	2016-2019
Forests and health. Health research and natural environment	BOSCOS I SALUT	Lluís Brotons / Jordi Vayreda	320.000,00 €	Obra Social "La Caixa"	2016-2018
Copernicus Climate Change Service (C3S): Production of Essential Climate Variable Datasets based on Earth Observations – Albedo, FAPAR & LAI	C3S	Aleixandre Verger	68.025,00 €	EU	2016-2018
Copernicus Global Land Service – Framework Contract for the operation, evaluation and evolution of the Global Land component of the Copernicus Land Service.	C-GLOPS1	Aleixandre Verger	216.000,00 €	EU	2015-2019
Coordinating an Observation Network of Networks EnCompassing satellite and In-situ to fill the Gaps in European Observations	CONNECTINGEO	Joan Masó	999.995,94 €	EU	2014-2017
Monitoring network for observing the status of Catalanian forest	DEBOSCAT	Jordi Martínez-Vilalta / Jordi Vayreda	45.000,00 €	Generalitat de Catalunya	2017
Wildlife in the Andorran Pyrenees (II)	EARTHWATCH PIRINEU (II)	Bernat Claramunt	89.528,00 €	EarthWatch Institute	2016-2018
Managing ecosystem services for fruit production in different European climates	ECOFRUIT	Anselm Rodrigo / Jordi Bosch	85.000,00 €	Ministerio Economía y Competitividad	2015-2017
Improving future ecosystem benefits through Earth Observations	ECOPOTENTIAL	Antonello Provenzalle	14.874.340,00 €	EU	2014-2019
The European network for observing our changing planet	ERA-PLANET	Nicola Pirrone	50.730.791,00 €	EU	2016-2021
Spread to natural environment of the most planted alien plants in the green areas in Barcelona	EXO BCN 2	Joan Pino	20.570,00 €	Ajuntament de Barcelona	2017
Use of biochar for soil nitrogen cycling regulation and for a new generation fertilisers	FERTICHAR	Josep Maria Alcañiz	193.600,00 €	Ministerio Economía y Competitividad	2016-2018

PROJECT NAME	ACRONYM	Principal investigator	Budget	Entity	Period
Saturation of carbon sinks: from a CO ₂ and N fertilization-dominated period to a warming-dominated period	FERT-WARM	Josep Peñuelas	321.860,00 €	Ministerio Economía y Competitividad	2016-2019
Vertebrate-dispersed woody species assembly in new Iberian forests: effects of species niches, landscape structure and dispersers behaviour	FORASSEMBLY	Joan Pino / Josep Maria Espelta	114.950,00 €	Ministerio Economía y Competitividad	2016-2018
Assessment and forecasting of ecosystem services in forests: impacts and adaptation to extreme climate events	FORESTCAST	Javier Retana / Lluís Brotons	134.310,00 €	Ministerio Economía y Competitividad	2015-2017
A functional traits approach to forest function and dynamics: implications for the provision of ecosystem services under climate change	Fun2Fun	Jordi Martínez-Vilalta	198.440,00 €	Ministerio Ciencia e Innovación	2014-2017
Ground Truth 2.0 - Environmental knowledge discovery of human sensed data	GROUND TRUTH 2.0	Joan Pino / Joan Masó	5.740.631,25 €	EU	2016-2019
Effects of phosphorus limitations on Life, Society and the Earth System	IMBALANCE-P	Josep Peñuelas	13.600.579,00 €	EU	2014-2020
INtegrated research on FOrest Resilience and Management in the mEDiterranean	INFORMED	François Lefevre	1.129.000,00 €	ERANET (Ministerio Economía y Competitividad)	2015-2017
Restore desertified areas with an innovative tree growing method across the Mediterranean border to increase resilience	LIFE GREEN LINK	Josep Maria Alcañiz	2.891.702,00 €	EU	2016-2020
Demonstration and validation of innovative methodology for regional climate change adaptation in the Mediterranean area	LIFE MEDACC	Gabriel Borràs	2.548.841,00 €	EU	2013-2018
Demonstration of a new agro-silvo-pastoral land use to improve farm profitability in mountain areas	LIFE POLYFARMING	Marc Gràcia	1.135.787,00 €	EU	2016-2021
Networks of knowledge and training for the effective management of Mediterranean forest habitats of Nature 2000	LIFE REDCAPACITA	Marta Múgica	590.154,00 €	EU	2016-2019
CREAF, the next MEDiterranean ECOlogical science & innovation HUB in Europe	MEDECO-HUB	Javier Retana	156.000,00 €	Ministerio Economía y Competitividad	2014-2017

PROJECT NAME	ACRONYM	Principal investigator	Budget	Entity	Period
COBERTES DEL SÒL	MIRAMON	Xavier Pons	35.000,00 €	Generalitat de Catalunya	2017
Mosquito Alert: a citizen platform for studying and control mosquitos which transmit global diseases	Mosquito Alert	Frederic Bartumeus	400.000,00 €	Obra Social "La Caixa"	2016-2018
A novel approach to determine canopy nitrification in the phyllosphere of European forests: combining multiple isotope tracers and proteogenomic techniques	NITRIPHYLL	Maurizio Mencuccini (Marie Curie fellowship granted to Rossella Guerrieri)	158.121,60 €	EU	2016-2018
Col.laboració per l'estudi, anàlisi i divulgació de resultats de treballs silvícoles i de la dinàmica forestal resultant del Programa de Restauració i Gestió Forestal a la Província de Barcelona	OTPMIF III	Josep Maria Espelta	44.130,00 €	Oficina Tècnica de Prevenció Municipal d'Incendis Forestals - DIBA)	2014-2017
Research and innovation in the control and restoration process of mining activities	PEDRERES	Josep Maria Alcañiz	24.000,00 €	Generalitat de Catalunya	2017
Hydraulic functional traits as determinants of forest function and drought responses. Putting xylem and phloem attributes into the functional trait map	PHLOEMAP	Jordi Martínez-Vilalta (Marie Curie fellowship granted to Elisabeth MR Robert)	158.121,60 €	EU	2016-2018
Local adaptation of plant POPulations during Range EXPANsions: the effect on life-history traits and genetic variability	POREXPAN	Maria Mayol	137.940,00 €	Ministerio Economía y Competitividad	2015-2017
Prismàtic, plataforma de coneixement per la gestió del patrimoni natural i de la biodiversitat	PRISMÀTIC	Anna Ramon	36.000,00 €	Generalitat de Catalunya	2017
Drought regime shifts and global warming: Impacts, mechanisms, forecasts and mitigation strategies	REGIME-SHIFTS	Jofre Carnicer	79.860,00 €	Ministerio Economía y Competitividad	2016-2019
A network of observatories of ecosystems (lakes and peatbogs) sensitive to the climate change in the Pyrenees	REPLIM	Marisol Felip	1.002.347,55 €	INTERREG	2016-2019
Shifts in ecosystems state in Mediterranean landscapes: when, where and how?	RESCRI	Lluís Brotons (Marie Curie fellowship granted to Enric Batllori)	223.000,00 €	EU	2015-2017

PROJECT NAME	ACRONYM	Principal investigator	Budget	Entity	Period
A global database of sap flow to unravel the ecological drivers of transpiration regulation in woody plants	SAPFLUXNET	Rafael Poyatos	196.020,00 €	Ministerio Economía y Competitividad	2015-2018
Regional forest governance dialogues fostering conscious forest ownership and sustainable wood mobilisation in Europe	SIMWOOD	Roland Schreiber	5.990.447,00 €	EU	2014-2017
Spatial heterogeneity in plant-pollinator communities: effects on interaction networks and consequences to pollination function	SPALINK	Anselm Rodrigo / Jordi Bosch	114.950,00 €	Ministerio Economía y Competitividad	2014-2017
Life history strategies to cope with human-induced rapid environmental changes	SURVIVE_HIREC	Daniel Sol	139.150,00 €	Ministerio Economía y Competitividad	2014-2017
Keys to understanding the transfer of atmospheric fluctuations to the dynamics of lake plankton	TRANSFER	Jordi Catalan	166.980,00 €	Ministerio Economía y Competitividad	2016-2019
Applying European market leadership to river basin networks and spreading of innovation on water ICT models, tools and data	WATERINNEU	Lluís Pesquer	914.991,00 €	EU	2015-2017
Gestió i avaluació de la composició química i l'acidesa de la precipitació de Catalunya	CARACTERITZACIÓ PLUGES	Anna Avila	29.025,00 €	Generalitat de Catalunya	2017
Remote sensing INdicators for DRough monitoring	INDRO	Josep Peñuelas (Marie Curie fellowship granted to Manuela Balzarolo)	170.121,60 €	EU	2017-2019
Resilience of Soil Stoichiometry in subarctic soils under Temperature-Induced Soil Carbon Losses: Where does the N go?	STOICA	Josep Peñuelas (Marie Curie fellowship granted to Sara Marañón)	170.121,60 €	EU	2017-2019
XARXA BOSCOS DINAMICA NATURAL	XARXA BOSCOS	JORDI VAYREDA	45.000,00 €	Generalitat de Catalunya	2017
IFN4	IFN4	JORDI VAYREDA	20.000,00 €	Generalitat de Catalunya	2017
SISEBIO	SISEBIO	JAVIER RETANA	45.000,00 €	Generalitat de Catalunya	2017

PROJECT NAME	ACRONYM	Principal investigator	Budget	Entity	Period
CANVIS AMBIENTALS	CANVIS AMBIENTALS	X.PONS/J.PINO/L. BROTONS	54.000,00 €	Generalitat de Catalunya	2017
EXOCAT	EXOCAT	JOAN PINO	50.000,00 €	Generalitat de Catalunya	2017
SERVEIS ECOSISTÈMICS	SERVEIS ECOSISTÈMICS	JOAN PINO	49.000,00 €	Generalitat de Catalunya	2017
POL.LINITZACIÓ	POL.LINITZACIÓ	Anselm Rodrigo / Jordi Bosch	20.000,00 €	Generalitat de Catalunya	2017
OCCC	OCCC	JORDI VAYREDA	80.000,00 €	Generalitat de Catalunya	2017
OBSERVATORI	OBSERVATORI	JAVIER RETANA	37.000,00 €	Generalitat de Catalunya	2017
Understanding soil fertility impacts on terrestrial biomass production in a changing environment	FIBER	Josep Peñuelas (Marie Curie fellowship granted to Benjamin Stocker)	158.121,60 €	EU	2017-2019
Definició, caracterització i difusió de la infraestructura verda de la demarcació de Barcelona, en el marc del Sistema d'Informació Territorial de la Xarxa d'Espais Lliures (SITxell)	MCS56-B SITxell II	Joan Pino	39.112,00 €	Diputació de Barcelona	2017
An Ecosystem of Citizen Observatories for Environmental Monitoring	WEOBSERVE	Joan Masó	1.069.507,50 €	EU	2017-2020
Implicant a la societat en l'adaptació al canvi climàtic al Delta de la Tordera	ISAAC TORDELTA	Javier Retana	50.634,00 €	Fundación Biodiversidad	2017-2018
Serveis climàtic pel nexus Aigua-Energia-Sòl-Alimentació	CLISWELN	Roger Cremades	1.004.303,20 €	ERANET (Ministerio Economía y Competitividad)	2017-2020
Unravelling the potential of spontaneous forest establishment for improving ecosystem functions and services in dynamic landscapes	SPONFOREST	Arndt Hampe	1.190.453,00 €	ERANET (Ministerio Economía y Competitividad)	2017-2020
Obtenció de mapes de cobertes del sòl i d'hàbitats CORINE i anàlisi dels canvis per a la conca del Besòs, dins l'Avaluació de l'estat de Qualitat dels Sistemes Fluvials de la Conca del Besòs (1997-2017)	BESOS 2017	Joan Pino	12.100,00 €	Consorci Besòs Tordera	2017

PROJECT NAME	ACRONYM	Principal investigator	Budget	Entity	Period
OGC Interoperability Program Initiative designated OGC Web Services, Phase 13 – ho afegim	Testbed-13	Joan Masó	14 905.09 €	Open Geospatial Consortium	2017
Plataforma integral per al control d'arbovirus a Catalunya	PICAT	Israel Molina	443.657,10 €	Generalitat de Catalunya	2017-2019
Biodiversitat i evolució en ecosistemes mediterranis	2017-2019 SGR/1006 MAYOL	Maria Mayol	20.000,00 €	AGAUR	2017-2019
GECA Grup d'Ecologia dels Canvis Ambientals	2017-2019 SGR/910 CATALAN	Jordi Catalán	60.216,00 €	AGAUR	2017-2019
Unitat d'Ecologia Global - Grup de Recerca Consolidat	2017-2019 SGR/1005 PEÑUELAS	Josep Peñuelas	60.216,00 €	AGAUR	2017-2019
Biogeografia funcional: resposta dels ecosistemes terrestres als canvis i gradients ambientals	2017-2019 SGR/1001 LLORET	Francisco Lloret	37.367,00 €	AGAUR	2017-2019
Dinàmica forestal i incendis	2017-2019 SGR/857 RETANA	Javier Retana	59.463,30 €	AGAUR	2017-2019
Demostració de l'ús d'una abella solitària per millorar la pol.linització de fruiters	DEMO	Anselm Rodrigo / Jordi Bosch	29.961,15 €	Generalitat de Catalunya	2017-2018
PROPOSTA DE CATÀLEG DE FAUNA I FLORA PROTEGIDA I AMENÇADA DEL PARC NATURAL DE CAP DE CREUS	SPAMCREUS	Sandra Saura	11.761,20 €	Generalitat de Catalunya	2017



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