Exploring the aquatic insect biodiversity of the Canary Islands: The BIOACUANA Project

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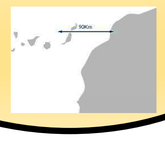
Fundación BBVA

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Origins: they were formed in the past 20 million years by volcanic eruptions

Relative isolation: they have never had physical contact with any continent



The Canarian Archipielago: key factors



Subtropical climate: warm temperatures and little seasonal variation

Biodiversity: isolation increased the speciation, high endemism

Relict Laurel forests: wet north-east wind circulation system forms "sea of clouds

Goals

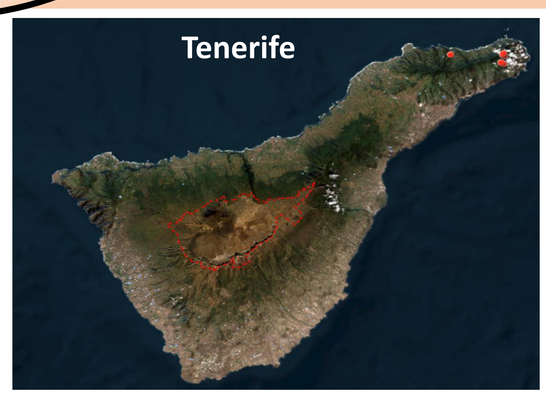
1) Hydrologically characterize the streams of Tenerife, La Palma and La Gomera

2) Produce basic information on the taxonomic and genetic diversity of aquatic macroinvertebrats

3) Determine the vulnerability the species to global change

4) Identify priority áreas for biodiversity conservation using systematic planning tools.

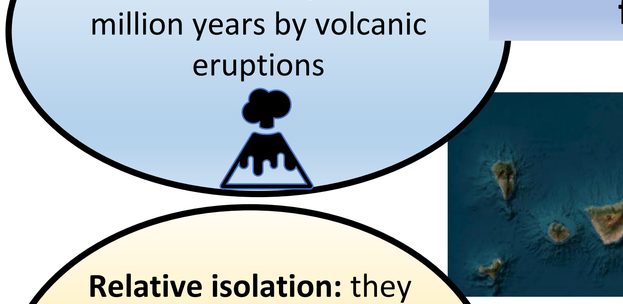
Study area







Methods



Aquatic macroinvertebrates sampling

17 sampling sites in pristine áreas or with low human pressures

Two seasons (fall 2022 and spring 2023)

Wide hydrological range (from flowing waters to desconected pools)



Sorting and conservation

Sampling of nocturnal adults (Ultraviolet light trap)



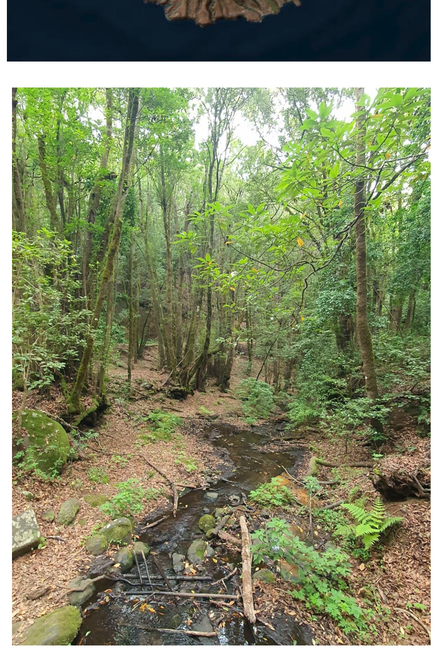
Sampling of adults (Emergence trap)



Barranco Igüeste, Anaga Rural Park



Playa de Taburiente, Caldera de Taburiente National Park



Barranco El Cedro Garajonay National Park

Preliminary results

NEW RECORDS

From La Palma:



Molophilus sp. (Diptera: Limoniidae)

From Anaga Rural Park (Tenerife):



Helobdella europaea (Rhynchobdellida: Glossiphonidae)

From La Gomera:



Berdeniella sp. (Diptera: Psychodidae)



Dugesia sp. (Tricladida:Dugesiidae)



Tonnoirella mollis (Diptera: Psychodidae)

From Caldera de Taburiente National Park (La Palma):



Polycentropus tenerifiensis (Trichoptera: Polycentropodidae)



Ulomyia sp (Diptera: Psychodidae)



Agapetus adejensis (Trichoptera: Glossosomatidae)



Notonecta canariensis (Heteroptera: Notonectidae)



Lepidostoma tenerifiensis (Trichoptera: Lepidostomatidae)



Velia lindbergi (Heteroptera: Veliidae)



Wormaldia tagananana (Trichoptera: Philopotamidae)

ENDEMIC SPECIES



Mesophylax aspersus canariensis (Trichoptera: Limnephilidae)

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