HOSTING GROUPS FOR INTERNATIONAL MOBILITY

Plant Ecology, Physiology and Systematics (PEPSy)

Our team investigates how plants interact with their environment and adapt to biotic and abiotic factors. Core competencies include taxonomic and morphological investigations, vegetation sampling, flora and vegetation monitoring, analyzing plant responses to stress (e.g., drought, salinity, temperature), studying photosynthesis, respiration, leaf water relations, water use efficiency, plant hydraulics and examining plant-soil-climate interactions. Our activities often integrate fieldwork and controlled experiments to assess ecological traits, physiological performance, and ecosystem functioning. Techniques may include karyology, microscopy, gas exchange measurements, chlorophyll fluorescence, and molecular or biochemical assays. Our research contributes to understanding plant adaptation, biodiversity, and responses to environmental change. We manage an air-conditioned lab equipped with workbenches, chemical hood, scales, pH meter, spectrophotometer, transmitted light stereomicroscope, Scholander pressure chamber, cryoscopic osmometer, small instrumentation (SPAD portable chlorophyll meter, fluorimeter, lab oven, portable conductivity meter and conductivity datalogger for aquatic environments, and light microscopes).

Team members:

Anna Geraci

Elisabetta Oddo

Giuseppe Bazan

Riccardo Guarino

Vincenzo Ilardi

Angelo Troia

Selected publications:

- *De Castro O., Geraci A., Mannino A.M., Mormile N., Santangelo A., Troia A. - A contribution to the characterization of Ruppia drepanensis (Ruppiaceae), a key species of threatened Mediterranean wetlands.* ***Ann. Missouri Bot. Gard.****, 106, 1-9 (2021) (https://doi.org/10.3417/2020520).*

- *Geraci A., Inzerillo S., Oddo E. - Physio-morphological traits and drought stress responses in three wild Mediterranean taxa of Brassicaceae.* ***Acta Physiol. Plant.****, 41, 106 (2019) (https://doi.org/10.1007/s11738-019-2899-5)*

- *Guarino R., Marcenò C., Ilardi V., Mannino A. M., Troia A. - One Chara does not make Charetea in the Mediterranean aquatic vegetation.* ***Webbia****, 74(1), 139–147 (2019) (https://doi.org/10.1080/00837792.2019.1607142)*

- *Guarino R., Pasta S., Bazan G., Crisafulli A., Caldarella O., Giusso del Galdo G.P., Gristina A.S., Ilardi V., La Mantia A., Marcenò C., Minissale P., Sciandrello S., Scuderi L., Spampinato G., Troia A., Gianguzzi L. - Relevant habitats neglected by the Directive 92/43 EEC: the contribution of Vegetation Science for their reappraisal in Sicily.* ***Plant Sociol.****, 58(2), 49-63 (2021) (https://doi.org/10.3897/pls2021582/05)*

- *Guarino, R., Cerra, D., Zaia, R., Chiarucci, A., Lo Cascio, P., Rocchini, D., Zannini, P., Pasta, S. - Remote sensing reveals fire-driven enhancement of a C4 invasive alien grass on a small Mediterranean volcanic island.* ***Biogeosciences****, 21, 2717–2730 (2024) (https://doi.org/10.5194/bg-21-2717-2024).*