2nd Mediterranean Plant Conservation Week
"Conservation of Mediterranean Plant Diversity: Complementary Approaches and New Perspectives"

Segetal plant diversity on Lemnos Island (Greece) – status quo and implications for conservation efforts within the TerraLemnia-project

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Why focus on agroecosystems?

Arable plants → ‚stepchildren of nature conservation' (no conservation instruments)

→ 1st trophic resource in agroecosystems

MOST OF THEM IS RELATED TO ARABLE PLANT DIVERSITY!!!

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Intensive farming is shepherding the collapse of the living world

Eurasian curlew

Insects such as these are less plentiful in Germany than they used to be. Agencja Fotograficzna Caro/Alamy

ZOOLOGY · 18 OCTOBER 2017

Flying insects are disappearing from German skies

The country has lost three-quarters of its aerial insects since 1989.

common!

HOLOSTIC ECOSYSTEM APPROACH

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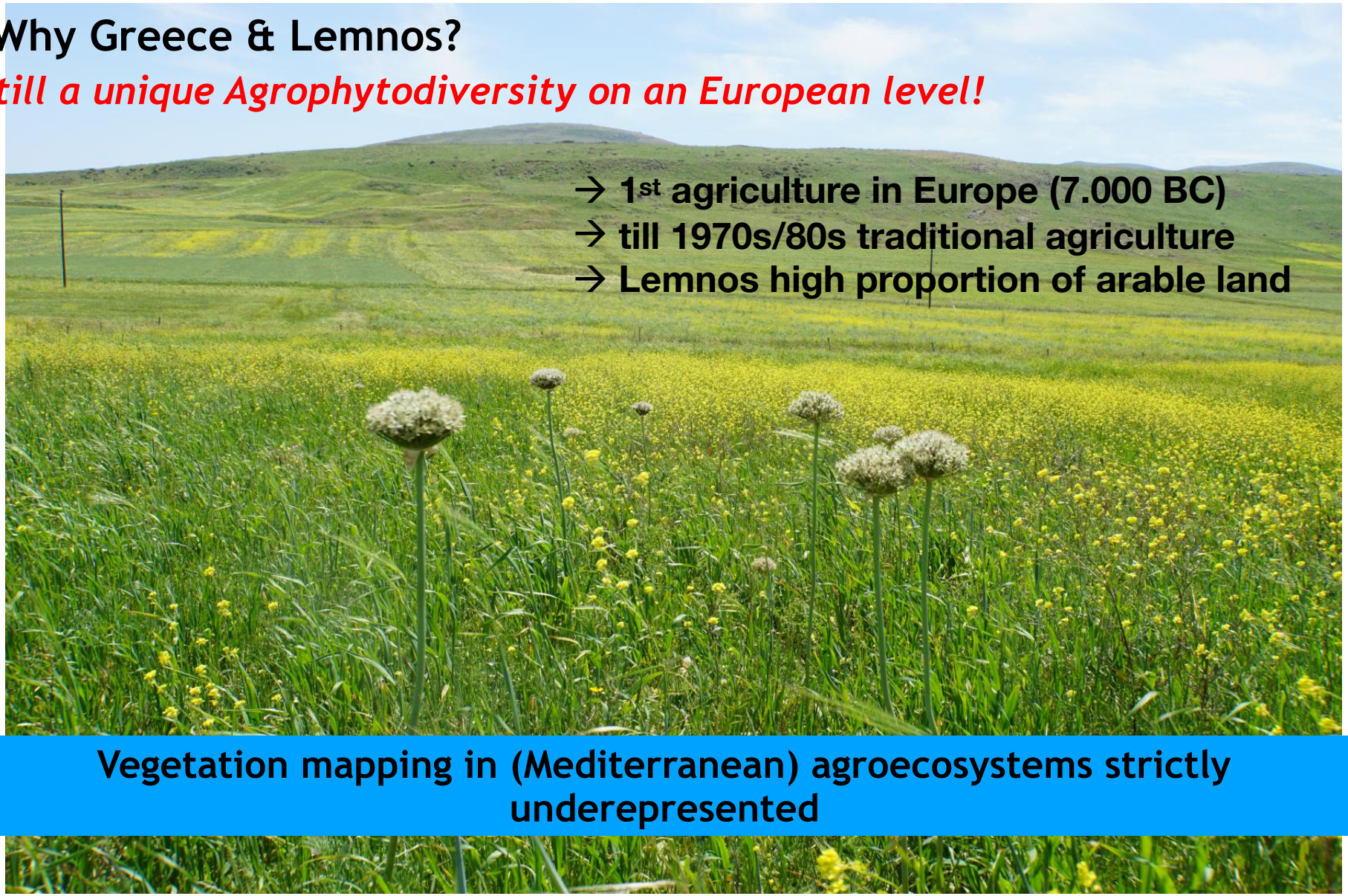
Why Greece & Lemnos?

Still a unique Agrophytodiversity on an European level!



→ 1st agriculture in Europe (7.000 BC)
→ till 1970s/80s traditional agriculture
→ Lemnos high proportion of arable land

Vegetation mapping in (Mediterranean) agroecosystems strictly underepresented

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Two trends:
Intensive agriculture (Industrial farming)
(favourable soils e.g. plains)

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Vegetation plot mapping on 49 arable fields with contrasting management

(+ CWR information)

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Preliminary results - Floristic survey

more than 80 wild arable plants observed, some of them for the first time for Lemnos
(*Anchusa aegyptiaca, Centaurea cyanus, Filago germanica, Gladiolus italicus etc.*)







Still some determination work
Expect: ~ 100 Arable plant species
~ 15% new for Lemnos

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Results - Bioindicator species linked with practices

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Supporting agrobiodiversity on arable land (*ex-situ/in-situ* approach)

1. Collecting seed material of rare arable plants (spring/summer 2019)
2. Ex-situ cultivation on Lemnos Island (autumn/winter 2019)
3. Re-Introduction on suitable fields

   → improving plots with less than optimum biodiversity (autumn 2020)*

* Accompanied by a **genetic analysis** (cooperation Partner: Senckenberg world of biodiversity, Germany)

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Supporting agrobiodiversity on arable land (*in-situ*)

Identifying target species (+ a lot of other species will benefit)

Requirements:

rare species on Lemnos, non-invasiveness, noxius, not yield supressing

Leontice leontopetalum

Bifora testiculata

Vaccaria hispanica

Medicago ciliaris

Vicia narbonensis

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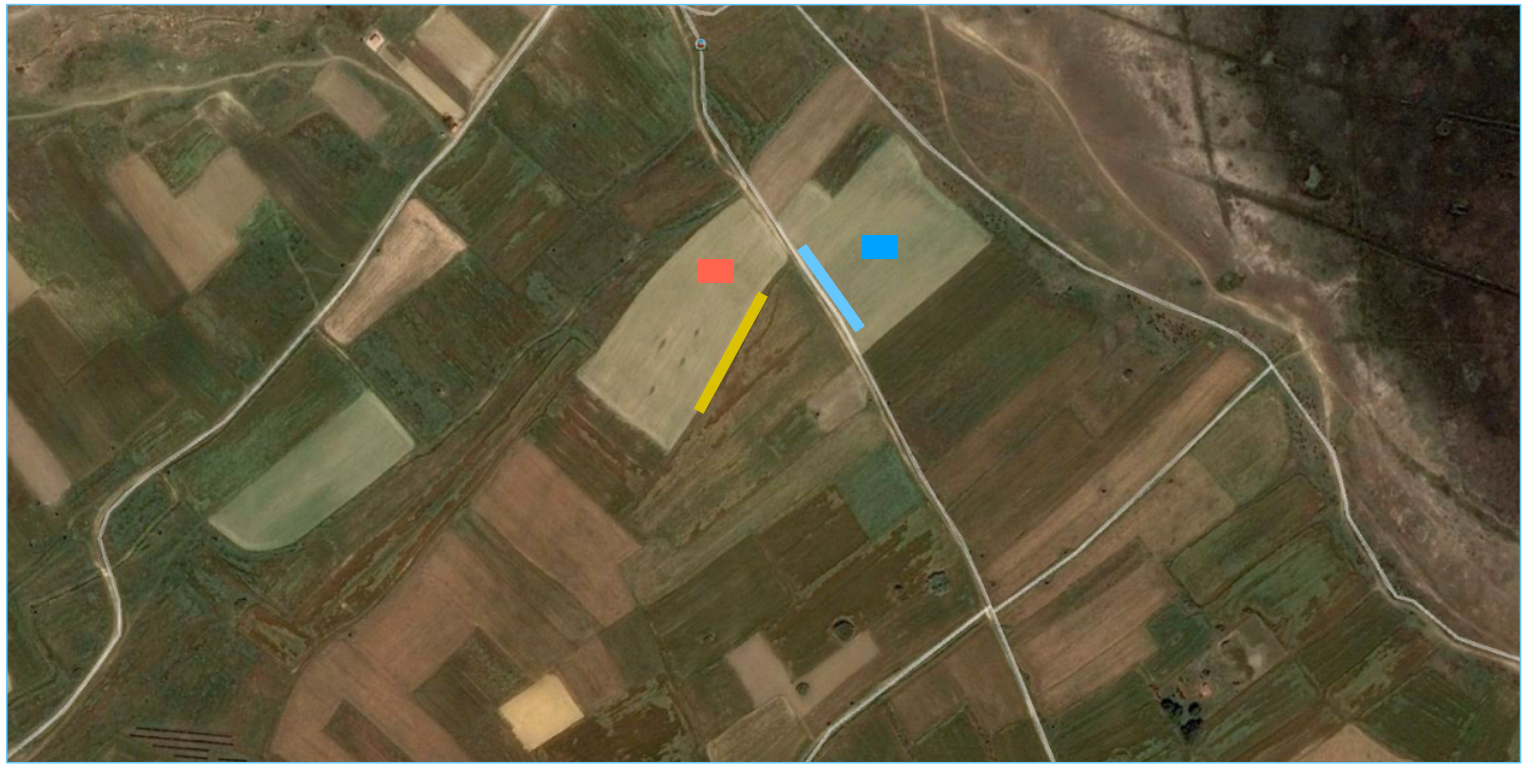
Approach for a monitoring system

Identify 8-10 arable fields where rare species wíll be introduced (autumn/winter 2020)
pair-wise comparison → original plot (2018) inner field + plot an the field edge
+ 2 plots in a „normal" managed field → floristic investigation 2021 and 2022



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TAKE HOME MESSAGES

- → a need for more relevant species information
- → establish a AES for traditional arable farming in Greece
- → raise awareness for arable plants ´weeds`
- → book project `Segetal flora of Greece`

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Human-made habitats

To conserve traditional farming is even less expensive and more constructive than to restore!

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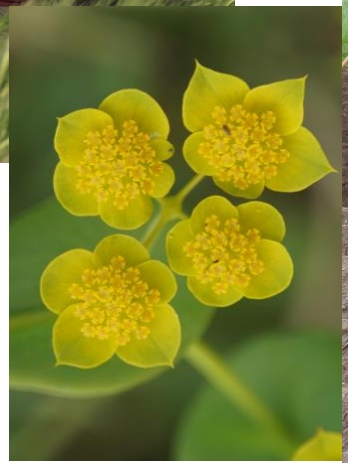
HOLD THE PEOPLE IN THE CULTURE LANDSCAPE!



Finally: We`re open for new collaborations/projects dealing with arable plant (CWR) diversity in agroecosystems in the Mediterranean!

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