

Surveying and Conserving the European *Avena* spp. Diversity



ANDREAS KATSIOTIS
Agricultural University of Athens, Greece

An Integrated European *In Situ* Management Workplan: Implementing Genetic Reserves and On Farm Concepts

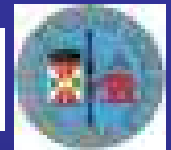
AGRI RES GEN 057
acronym: AEGRO



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WP 8 Case study *Avena*

Prioritize species and populations, identify sites suited to establish genetic reserves and develop guidelines for genetic reserves design, management and monitoring.

WP8 case study *Avena* methodology

- 1. Taxon delineation**
- 2. Selection of target taxa**
- 3. Ecogeographic diversity analysis**
- 4. Selection of target sites**

Athens, Greece - March 26 & 27 2008



A. Drossou, N. Nikoloudakis, I. Loskutov, M. Leggett, G. Ladizinsky, C. Germeier and P. Garcia

Selection of target taxa

- **current conservation status**
- **socio-economic use**
- **threat of genetic erosion**
- **ecogeographical distribution**
- **biological importance**
- **cultural importance**
- **cost, feasibility and sustainability**
- **legislation**
- **ethical and aesthetic considerations**
- **priorities of the conservation agency**

a. priority list based on actual or potential use of gene donors (identify primary, secondary and tertiary gene pools)

b. priority list based on threat and/or distribution

Species under consideration

Primary genepool (6x) :

ACD genome *A. sterilis*, *A. fatua*

Secondary genepool (4x) :

AC genome *A. maroccana*, *A. murphyi*, *A. insularis*

AB genome *A. barbata*, *A. vaviloviana*, *A. abyssinica*

Tertiary genepool (2x) :

A genome:

A_s *A. strigosa*, *A. brevis*, *A. hirtula*, *A. lusitanica*, *A. matritensis*

A_d *A. damascena*

A_l *A. longiglumis*

A_c *A. canariensis*

A_p *A. prostrata*

C genome:

C_p *A. eriantha*, *A. clauda*

C_v *A. ventricosa*

Geographic distribution of prioritized *Avena* species



year 2009 - Cyprus

year 2010 – Sicily and Andalusia



Cyprus – Crete (Greece) surveying/collection trip (June 3rd to June 6th 2009)



Gideon Ladizinsky, Angelos Kyratzis and Andreas Katsiotis

FLORA OF CYPRUS

VOLUME ONE

R. D. MEikle

The Herbarium, Royal Botanic Gardens, Kew

1977

Published by The Bentham-Moore Trust
Royal Botanic Gardens, Kew

Flora of Cyprus

1. *Avena barbata*
2. *Avena ventricosa*
3. *Avena eriantha*
4. *Avena fatua*
5. *Avena byzantina*
6. *Avena hirtula*
7. *Avena ludoviciana*
8. *Avena sterilis*
9. *Avena wiestii*

Avena ventricosa : three references in Flora of Cyprus

1. Kampos (1928)
2. Between Nissou and Stavrovouni (1933)
Athalassa Farm and near ARI (1967 – Merton)
3. Nicosia airport (1951 – Merton)



Avena hirtula : three sites in Flora of Cyprus

1. Prodhromos (1953 – Merton)
2. Yialia (1955 - Merton)
3. Kakopetria (1955 – Merton)



Avena ventricosa



Avena hirtula

purple stem
purple lower spikelet
long lemma tips
dense panicle



10. Koronia – *A. ventricosa*, *A. hirtula* and *A. sterilis*

4, 5



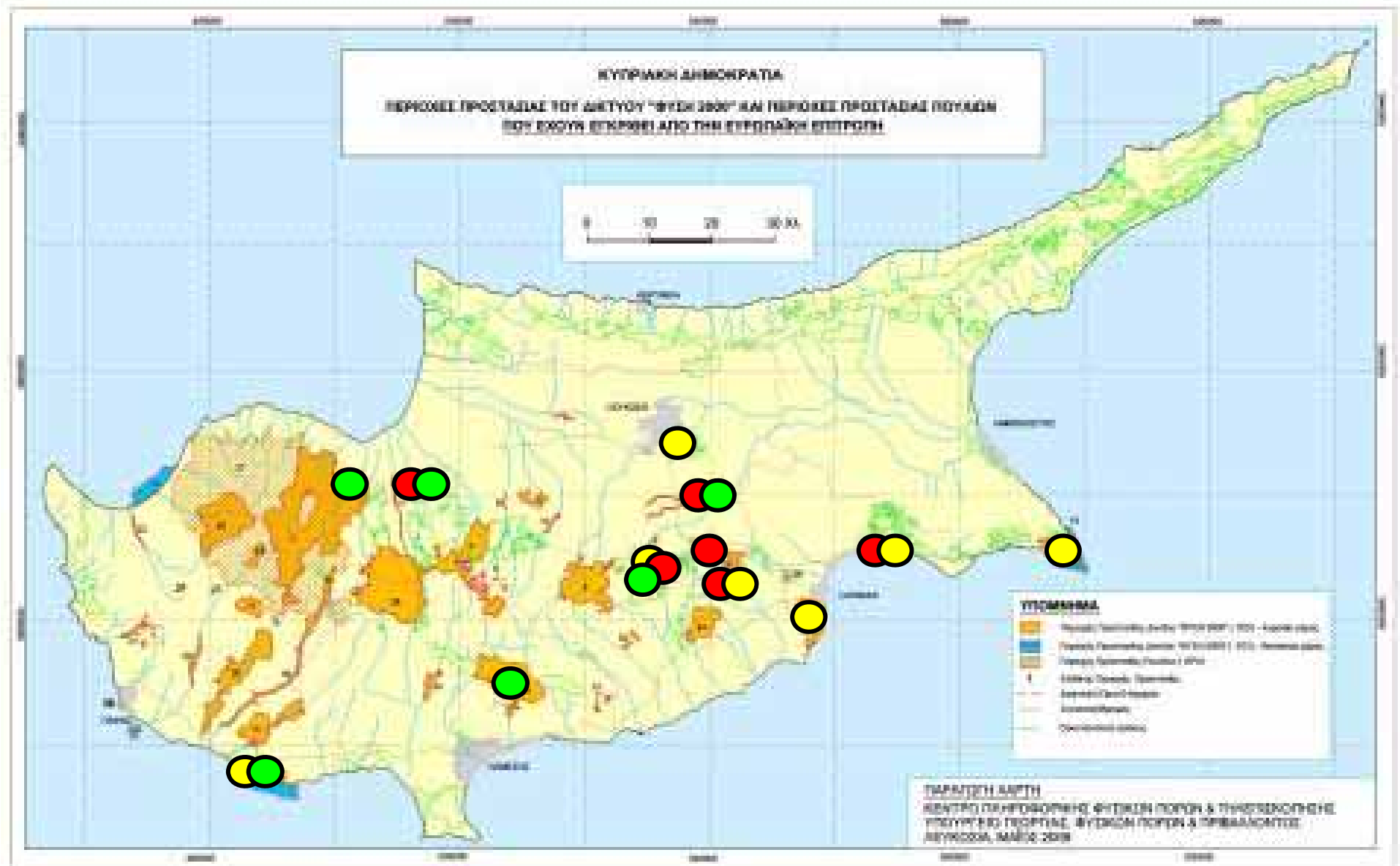


25. A. ventricosa

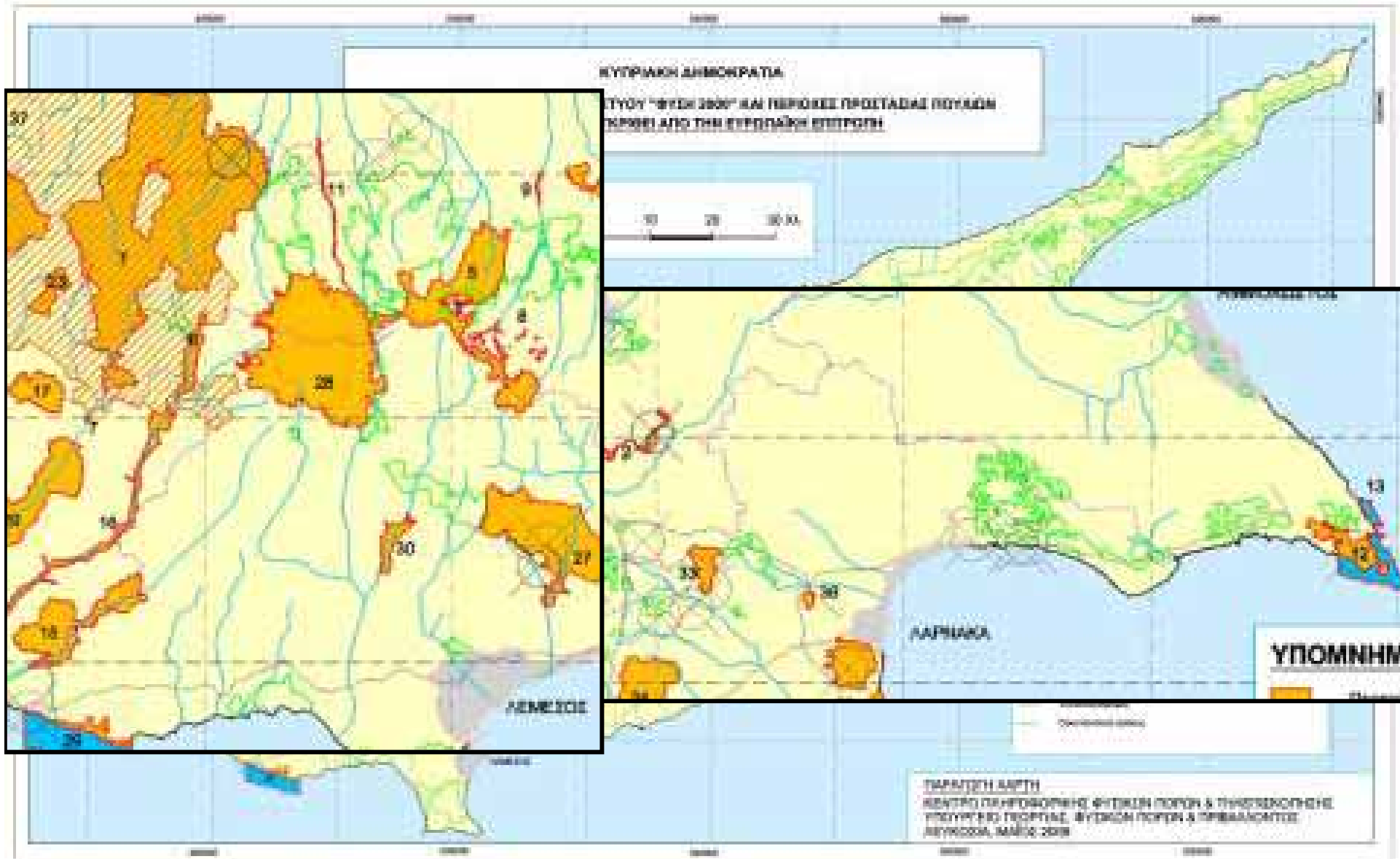


A. barbata

A. ventricosa



A. eriantha *A. ventricosa* *A. hirtula*

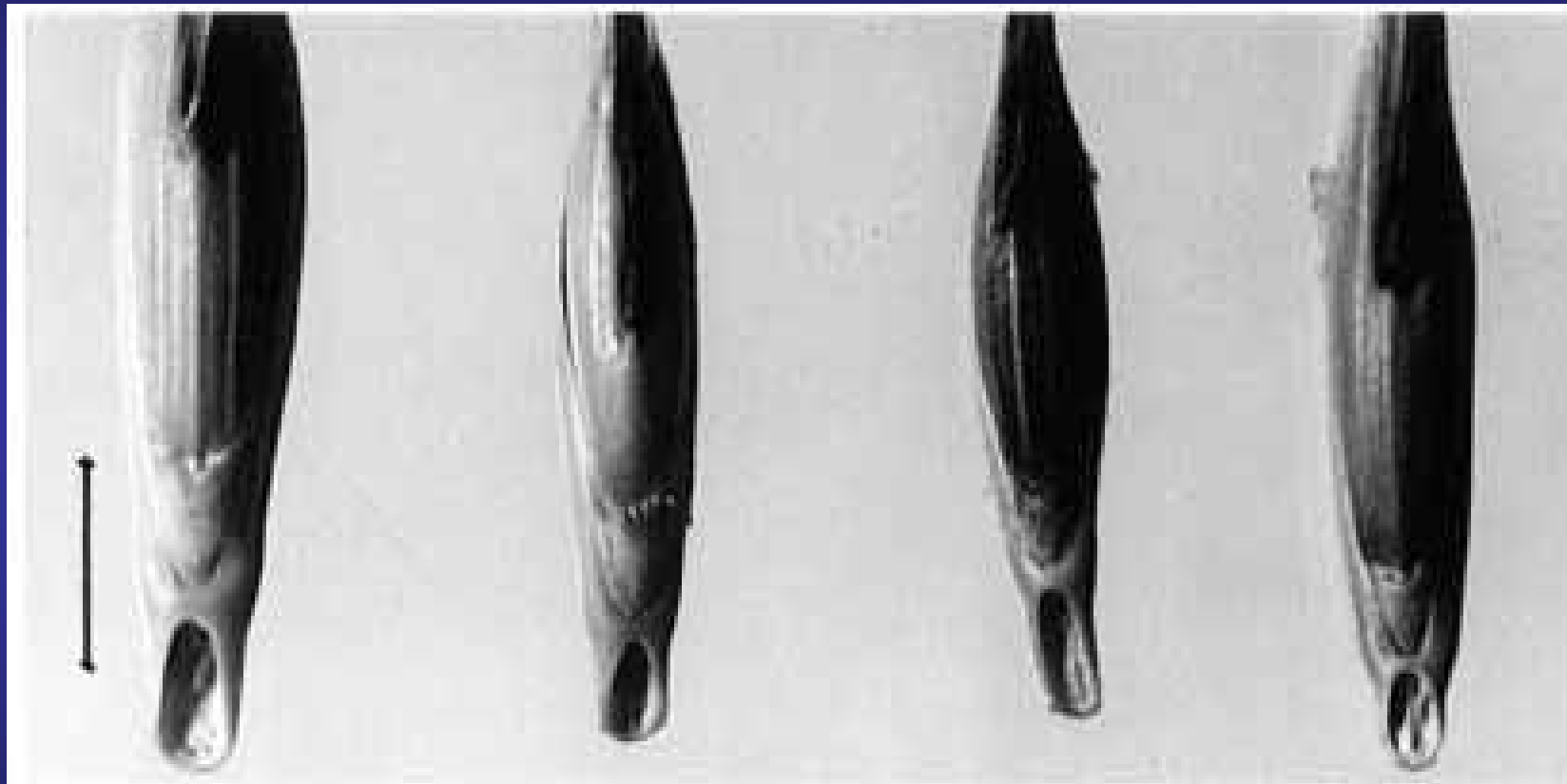


Sicily (Italy) surveying/collecting *A. insularis* (May 8th to May 10th 2010)



Gideon Ladizinsky, Ferdinando Branca, Alessandro Tribulato and Andreas Katsiotis

Morphological differences between *A. sterilis* (AACCD) and *A. insularis* (AACCC)



A. magna

A. murphyi

A. insularis

A. sterilis









Locality Page includes a map indicating places of historical interest.

**Andalusia (Spain) surveying *A. murphyi*, *A. longiglumis*, *A. hirtula*
(May 10th to May 15th 2010)**



Gideon Ladizinsky, Pedro Garcia and Andreas Katsiotis



ANDALUSIA



Avena murphyi









Avena longiglumis





Park National de Donana



Summarizing

1. In Cyprus *Avena ventricosa* is found within Natura 2000 and protected areas by the Forestry Department
2. In Sicily *Avena insularis* is present in areas protected by the regional Forestry Department
3. In Andalusia *Avena murphyi* is present in fields with proper management (late grazing of cows)
4. Species *Avena hirtula* and *Avena longiglumis* are found in protected areas

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