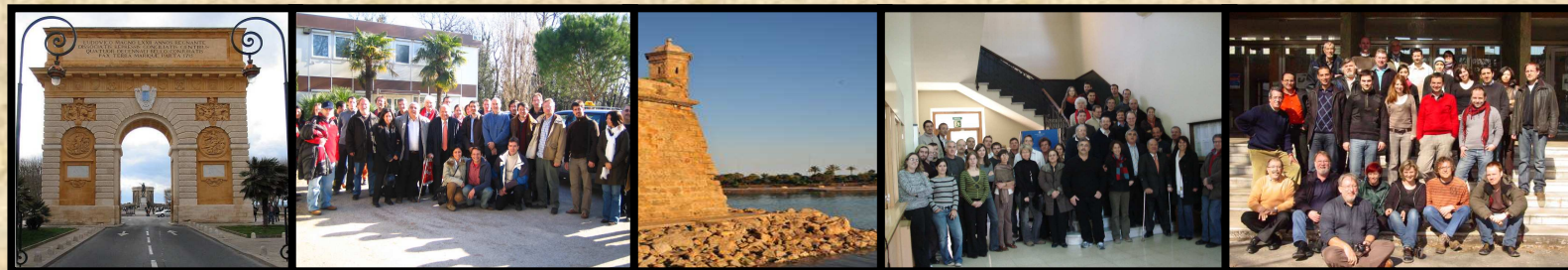


MEDREONET: "Surveillance network of Reoviruses, Bluetongue and African Horse Sickness, in the Mediterranean Basin and Europe"

WP 2: Regional surveillance of vectors.



WP2 Leaders: Miguel Miranda & Matthew Baylis

Centre de coopération internationale en recherche agronomique pour le développement **CIRAD**

Istituto Zooprofilattico Sperimentale "G. Caporale" **IZS A&M**

Universidad Complutense de Madrid **UCM**

University of the Balearic Islands **UIB** (University of Zaragoza **UZ**,
Centre se Recerca en Sanitat Animal **CRESA**)

Institute of Animal Health **IAH**

University of Liverpool. **U Liv.**

Onderstepoort veterinary Institute. **OVI**

Friedrich- Loeffler Institute. Deutsches Entomologisches Institut. **FLI/DEI**

Institute of Tropical Medicine. **ITMA**

Institute of Parasitology. University of Zürich.

Objectives

General:

Strengthening Culicoides entomological surveillance in Europe and neighbouring countries.

Specific:

Evaluation and harmonisation of (1) surveillance protocols and (2) available tools for trapping,

Identification of vectors and modelling of vector habitat

D2.1 - Recommendation of the optimal trap design for sampling *Culicoides*

D2.2 - Guide to the identification of *Culicoides* vectors and potential vectors present in the Mediterranean basin, including molecular methods.

D2.3 - Assessment of the relationship between *Culicoides* vector density and BT and AHS 'risk'

D2.4 - Evaluation of the role played in Europe by novel (non- *C. imicola*) vector species

D2.5 - Standardised protocols for detection of presence/absence and estimation of abundance of *Culicoides*.

D2.6 - Evaluation of available models of suitable vector (larval and adult) habitat

D2.7 - Recommendations on optimal surveillance protocols for *Culicoides*, according to the needs of the country (to confirm vector absence; to demarcate areas of low or zero risk; to monitor vector spread)

D2.8 - A reference collection of *C. imicola* specimens from across the region for future DNA analysis

D2.1 - Recommendation of the optimal trap design for sampling *Culicoides*

Field work finished!!!

TRAP COMPARISONS

Data from SA, Spain, Germany and France.



Recommendations about profile of traps and variables that affects its performance.

D2.1 - Recommendation of the optimal trap design for sampling *Culicoides*



STABLING

Paper coming from M. Baylis and data will be compared with those obtained in Belgium.

Recommendations on sampling methods for accurately checking the density of midges inside and outside stables.

D2.1 - Recommendation of the optimal trap design for sampling *Culicoides*

COLLABORATIVE TEST FOR INSECTICIDES

A protocol is already available.

Test will be conducted according to midges and WHO kits availability.

Will continue in the framework of EDENext????

D2.2 - Guide to the identification of Culicoides vectors and potential vectors present in the Mediterranean basin, including molecular methods.

MOLECULAR TAXONOMY

Ring trials are finished.

Comparisons among labs are difficult due to different procedures.

Data is under statistical analysis and final results will be distributed among participants for final discussion.

BARCODING

A common protocol will be developed and distributed. Voucher specimens will be prepared and preserved. A standardized metadata file will be associated to each specimen.

D2.2 - Guide to the identification of Culicoides vectors and potential vectors present in the Mediterranean basin, including molecular methods.

MORPHOLOGICAL TAXONOMY

An impressive work has been conducted.

First trial version will be launched in Feb 2010 and improved after participants comments.

The list of Western European species is ongoing.

The first draft of a paper proposing a nomenclature for Culicoides taxonomy according to the rules of the Zoological Nomenclature Code will circulate to be commented. Institutes working on taxonomy will be asked to give their agreement to this nomenclature

D2.3 - Assessment of the relationship between Culicoides vector density and BT and AHS 'risk'

ACTIONS: *Analysis of available data at local/ national level in regards to BTV and AHS outbreaks as well as Culicoides vector distributions. The data is needed to be integrated in a GIS context.*

Sources variation of abundance will be discussed: on farms, between farms, large scale...

It is still a pending task.

D2.4 - Evaluation of the role played in Europe by novel (non-*C. imicola*) vector species.

Vector competence studies have increased in the last year.

ACTIONS: *The participants agreed to develop a common protocol for evaluating vector competence.*

It is still a pending task, but easy to afford. A general protocol already published will be but some specific recommendations will be added.

D2.5 - Standardised protocols for detection of presence/absence and estimation of abundance of *Culicoides*.

It is still a pending task.

Data from Liverpool about continuous trapping and presence /absence parameters.

D2.6 - Evaluation of available models of suitable vector (larval and adult) habitat

ACTIONS: The participants agreed to conduct a review of the available models across Europe. The institutions that will participate in this action are CIRAD, IZS, UCM, UIB, IAH and U. Liv. The action will be coordinated by Drs. Baylis and Conte.

D2.7 - Recommendations on optimal surveillance protocols for *Culicoides*, according to the needs of the country (to confirm vector absence; to demarcate areas of low or zero risk; to monitor vector spread).

*ACTIONS: The participants agreed to link this deliverable with D2.5. Standardised protocols for detection of presence/absence and estimation of abundance of *Culicoides* and consequently with D2.1. Recommendation of the optimal trap design for sampling *Culicoides**

A first draft will be released in two months and discussed by all the participants,

D2.8 - A reference collection of *C. imicola* specimens from across the region for future DNA analysis

Samples have been collected in different laboratories. They will be used for Barcoding studies and phylogeny studies.

Voucher will be preserved for future analysis and future collaborations.

A final meeting of the WP2 will be organized in Tunisia in March/April 2010.

The first draft of the final report will be then discussed.