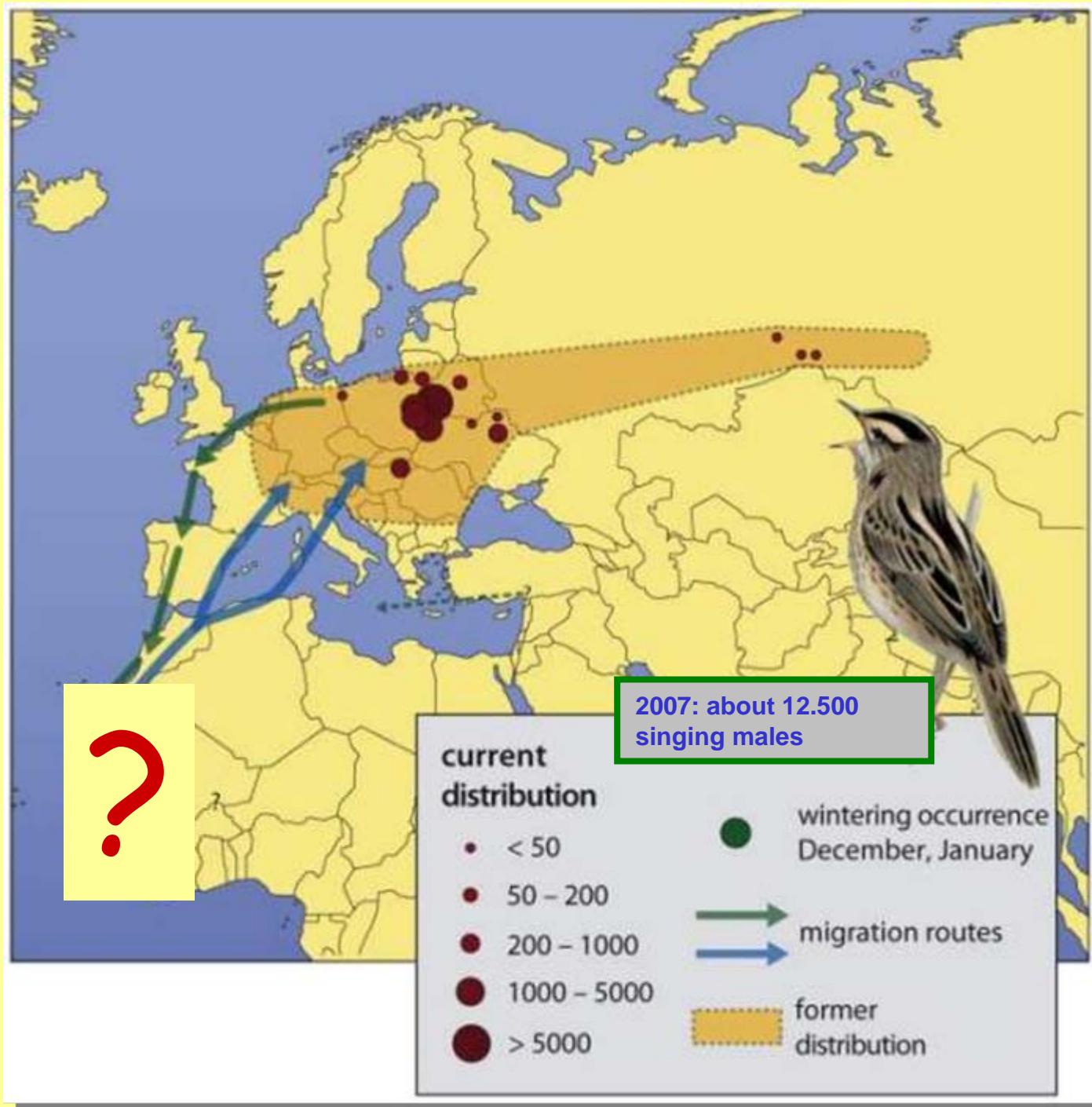


# Wintering areas of the Aquatic Warbler *Acrocephalus paludicola*: assessment of recent discoveries and future prospects

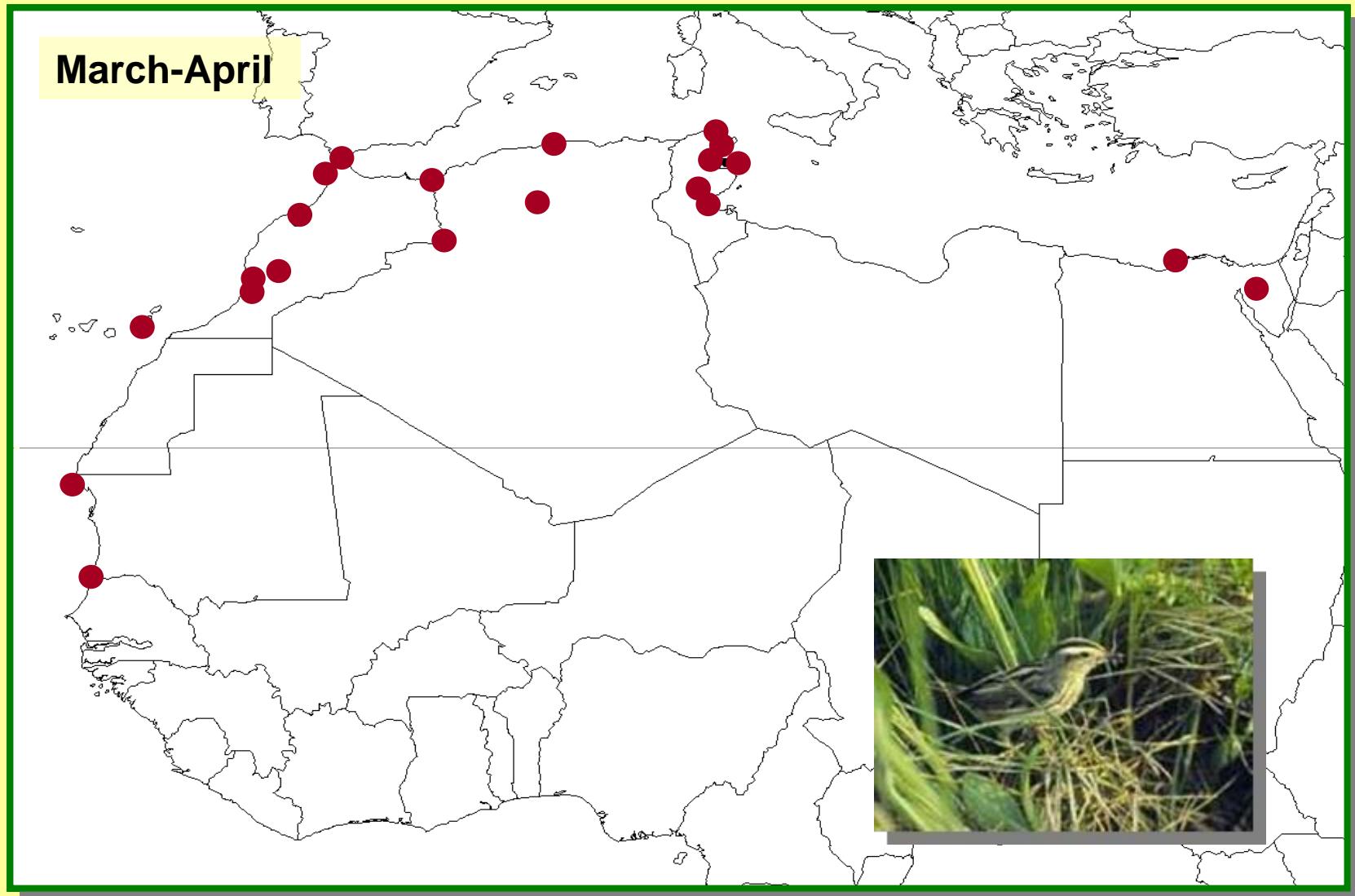


Lars Lachmann, Martin Flade, Ibrahima Diop & Volker Salewski, AWCT





## Desk study 1: Collecting records during the non-breeding period (Schäffer et al. 2006)

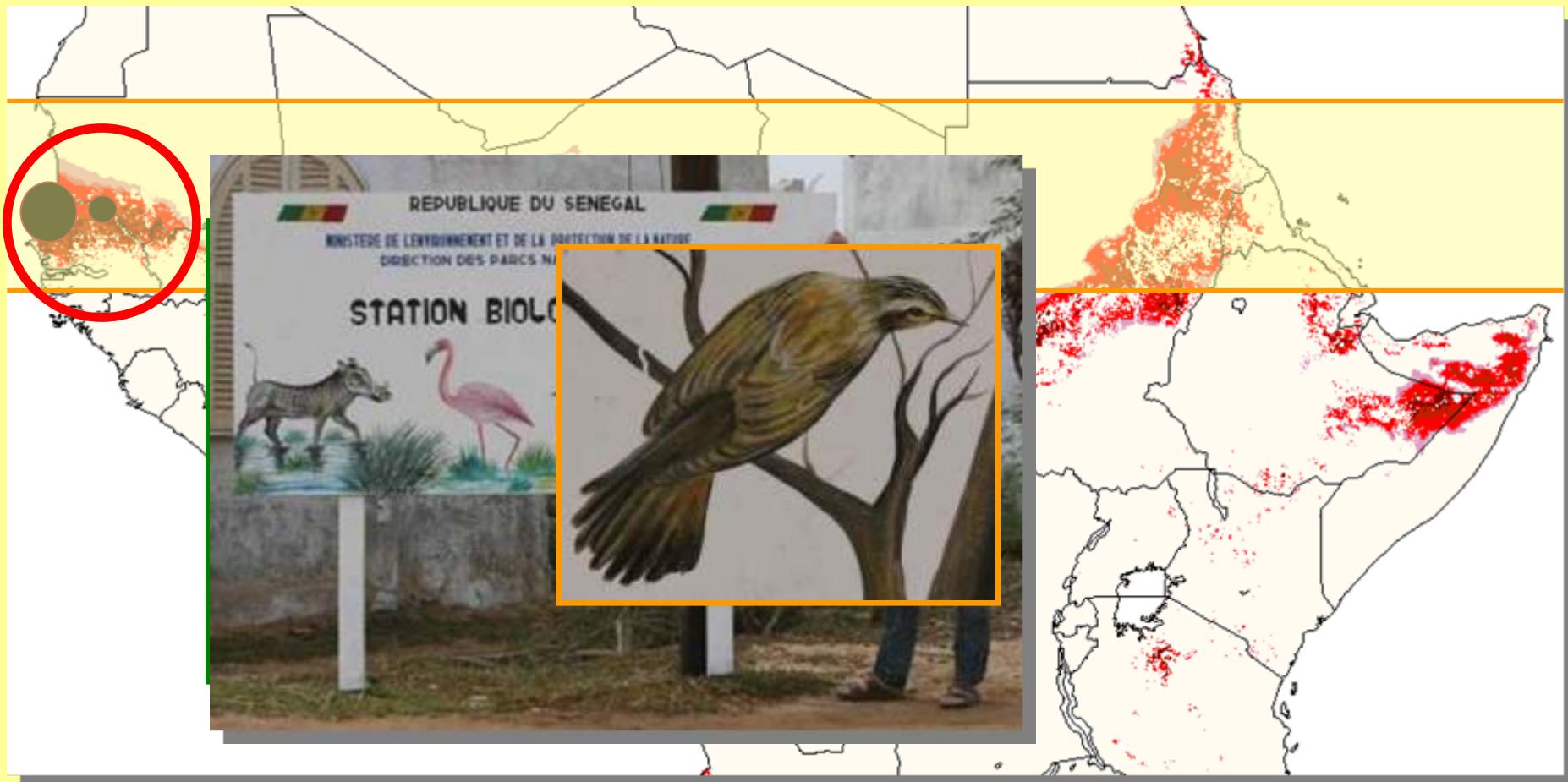


Desk study 2:  $\delta^{13}\text{C}$  isotope analysis  
(Pain et al. 2004 and unpublished)



Potential non-breeding range: 13°-20°N

## Desk study 3: BIOCLIM modelling of non-breeding distribution (see also Walther et al. 2007)



# Djoudj Expedition January-February 2007: 39 participants from 12 countries from 2 continents

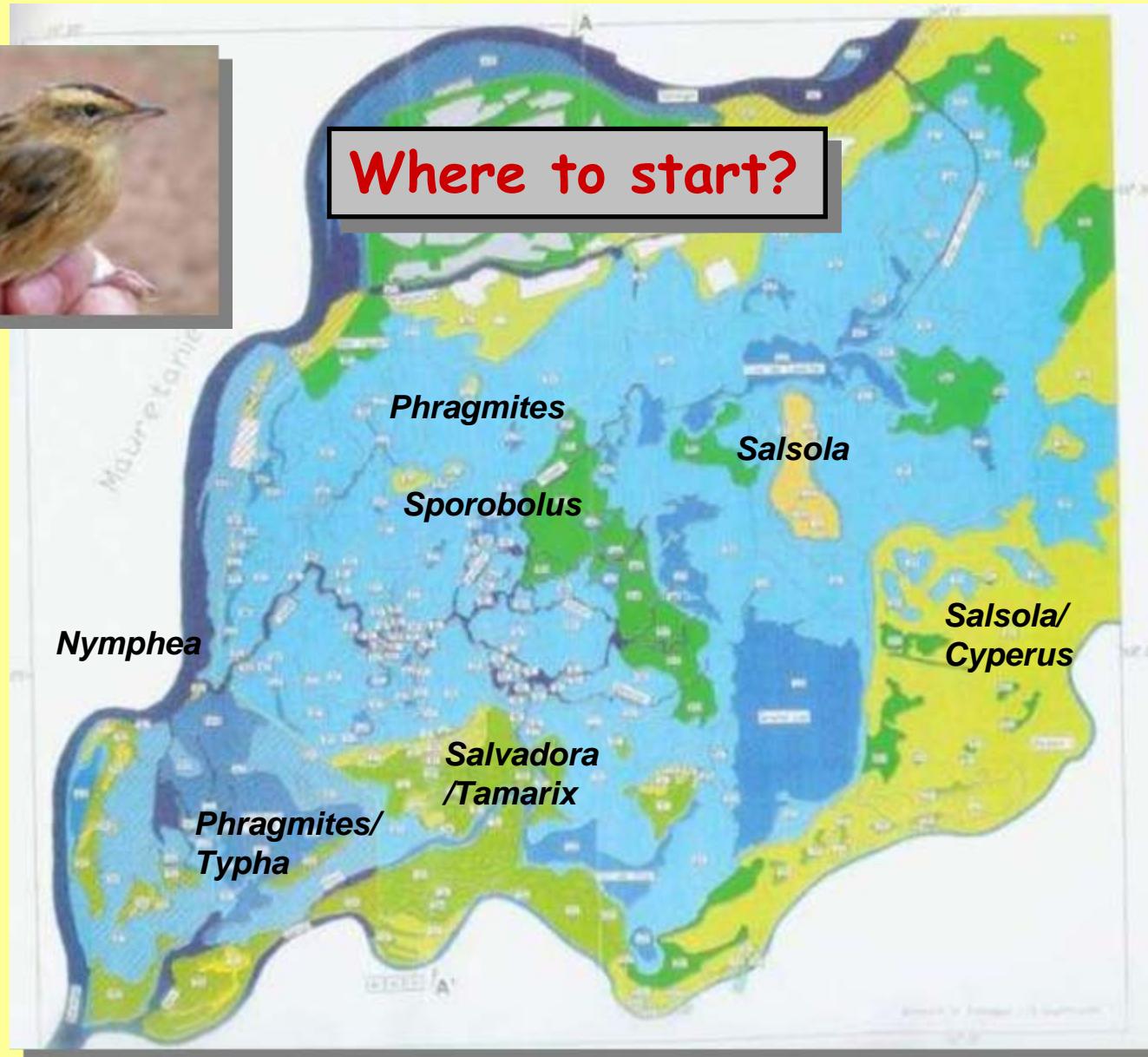


# The Djoudj area





# Vegetation map of Djoudj National Park (Schwöppe 1994)



## Mistnetting in *Typha*: - no success



# Mistnetting in deep water: - no success



## Mistnetting at a lake shore: - no success



# Mistnetting between *Tamarix*: - no success



Mistnetting in *Scirpus/Oryza/Sporobulus* marshes:  
- SUCCESS!





## 56 Aquatic Warblers mistnetted within two weeks

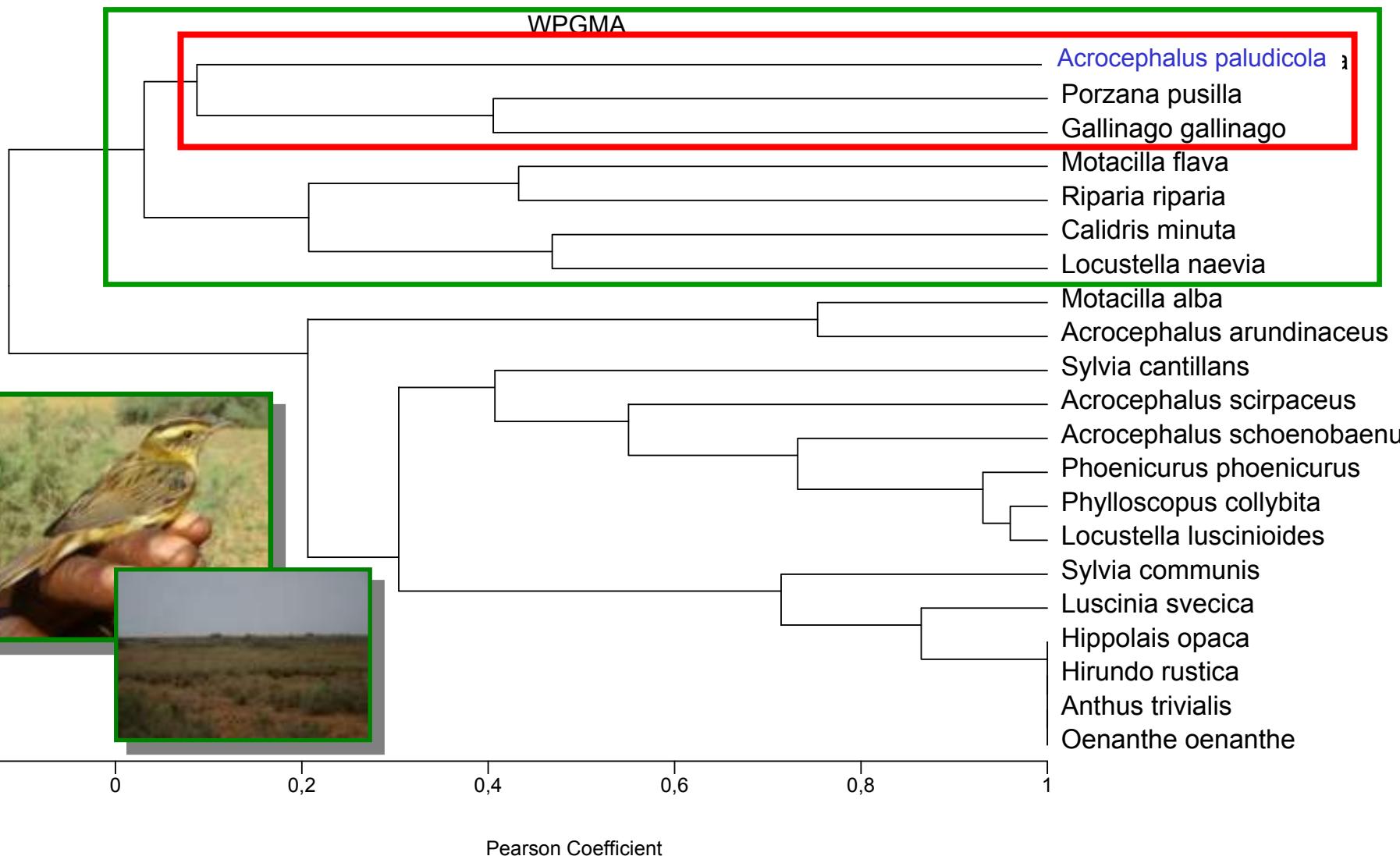


Blood and feather  
samples for genetic  
and isotope studies

# Fifty-six Aquatic Warblers mistnetted within two weeks



# Cluster analysis of European bird species according to the occurrence at the trapping sites



# Catching birds with claptraps

Baillon's Crake  
*Porzana pusilla*



Sixteen captured  
two former Senegalese  
records  
*... but no Aquatic Warbler*

## Rope method to catch Aquatic Warblers:







# Estimation of total number of wintering Aquatic Warblers in Djoudj:

Suitable habitat: 10,000 (-13,000) ha



Density: 0.5-1.5 Aquatic Warblers/ha.

5,000 - 15,000 Aquatic Warblers on Senegalese side of the Senegal delta

The Djoudj NP holds at least 17%, potentially 50% or more of the global population (c. 30,000 birds in late winter)!

Where is the rest?

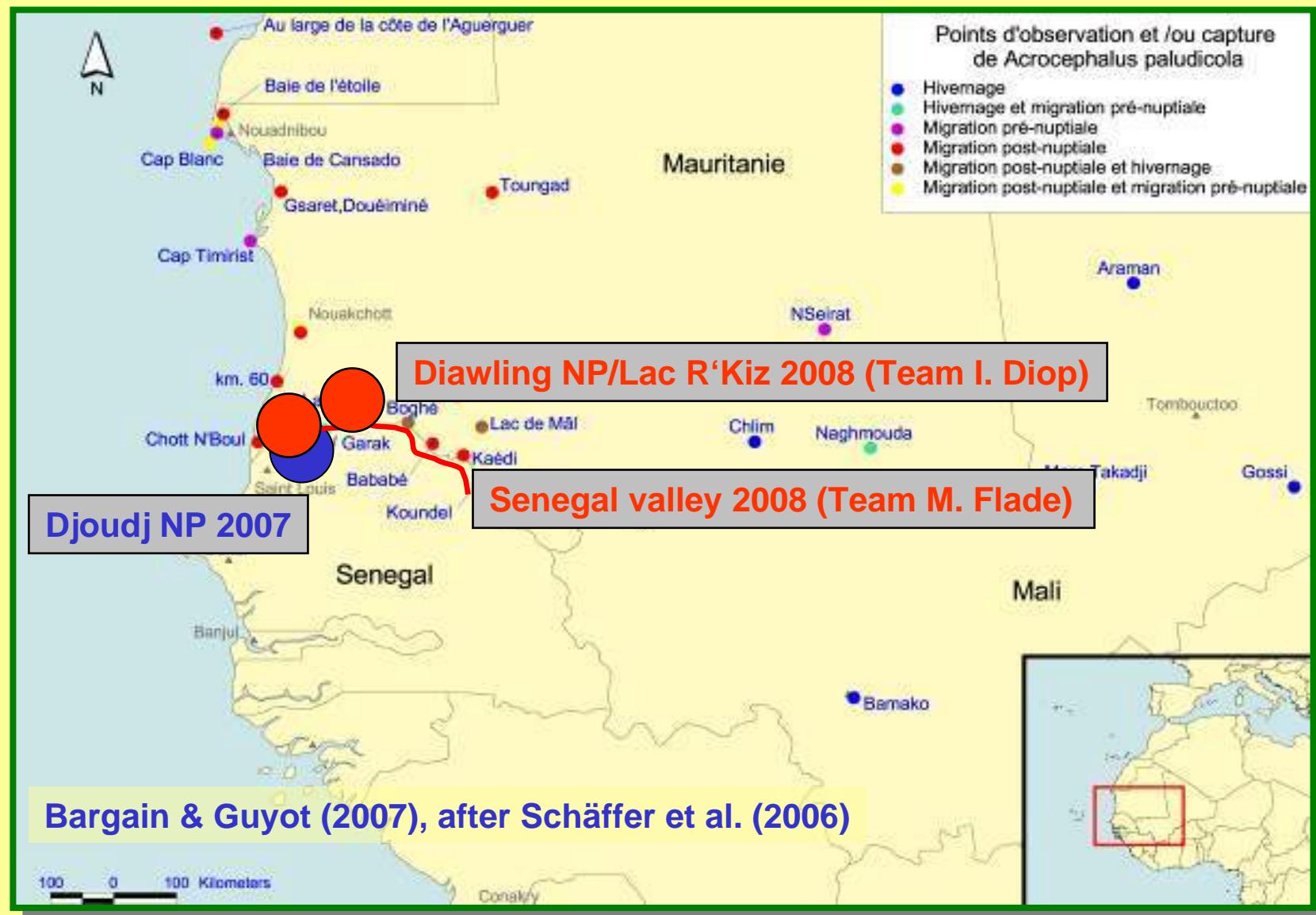
## Potential threats for Aquatic Warbler habitats in the Djoudj area:



- Changes in landscape water budget
- Changes in salinity (causing changes in vegetation structure and food supply)
- Changes in water management
- Changes in precipitation (climate change)

# Known records of Aquatic Warbler in 2007

## Senegal/Mauritania Expedition January 2008



## Mauritania:



## Senegal Valley:

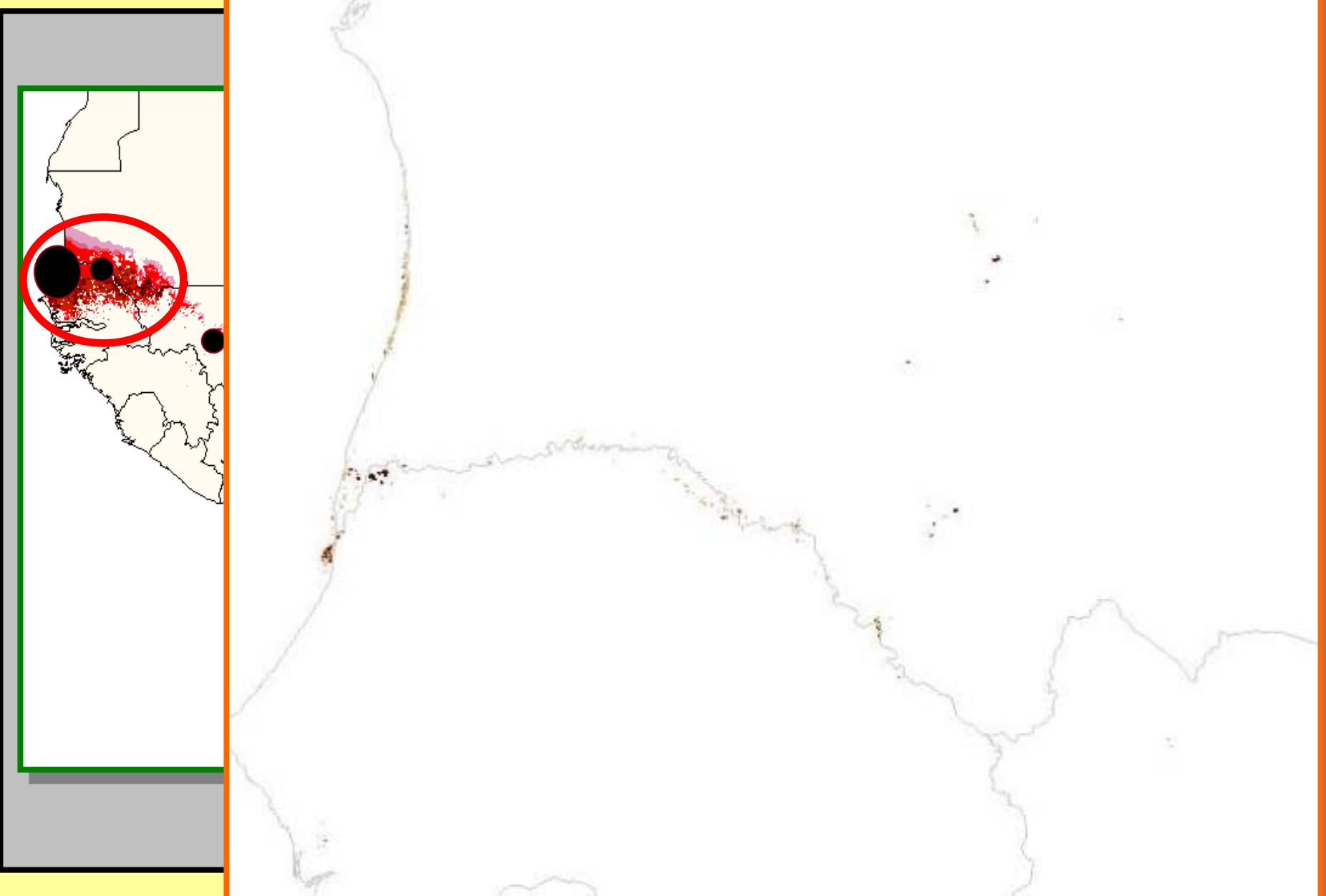


Lac Ndiael near Ross Betio

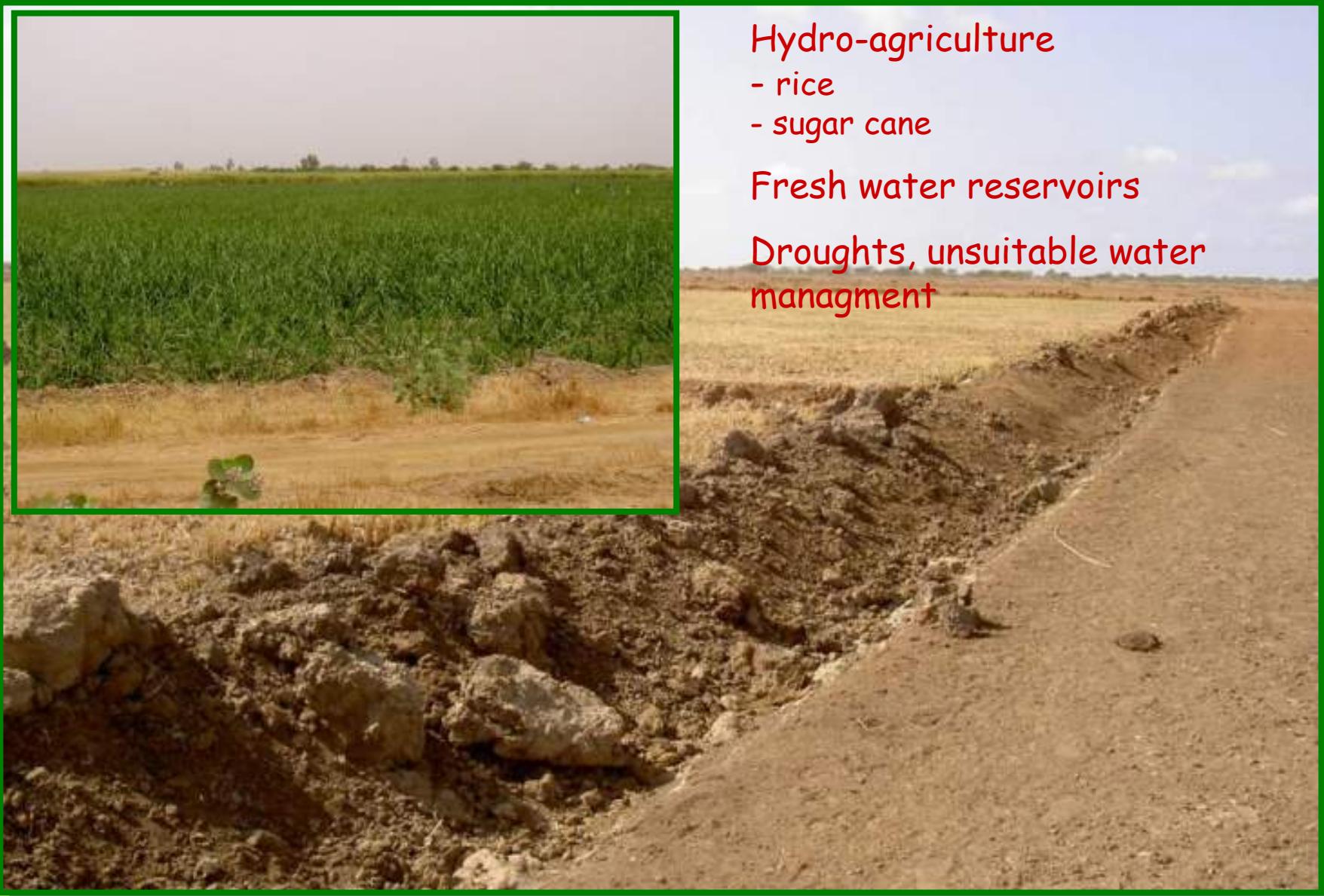


# New modelling of non-breeding distribution

(data from January 2008, satellite image from 2007)



# Main threat in West Africa: habitat destruction



Hydro-agriculture

- rice
- sugar cane

Fresh water reservoirs

Droughts, unsuitable water  
management

# Telemetry study to assess habitat use and requirements of Aquatic Warblers



## What next: outlook

### 2008/2009:

- further analysis of feather isotope ratios
- expert comments on search map from ornithologist working locally
- Training workshop for leading local ornithologists from Senegal, Mali, Gambia and Mauritania
- more accurate number estimate for Djoudj
- continued study on habitat use in Djoudj
- checking of potential sites in Gambia and southern Senegal (Casamance)

### 2009/2010:

- Another expedition checking potential sites

A model for successful inter-continental co-operation to protect a globally threatened migratory species



The Senegal 2007 Team

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