Symposium on Fire Management
in Cultural and Natural Landscapes, Nature Conservation
and Forestry in Temperate-Boreal Eurasia
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Prescribed burning for fuel reduction purposes in a conservation context

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Characteristics of prescribed burning in France

- Continuous development since late eighties
- Various origins of prescribed burning teams
- Support of prescribed burning network

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An institutional consolidation limited to fire management

- National training system
  - prescribed burning bosses / prescribed burning crews
  - More than 100 prescribed burning bosses accredited
- Adaptation of the forestry law (2001)
  - Ownership
  - Only for fuel reduction

2005 training group

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Extension of prescribed burning development in France

- 27 teams in 2008
- 65 000 ha on the last 20 years period
- Mean annual area burnt
  - 4000 ha/year

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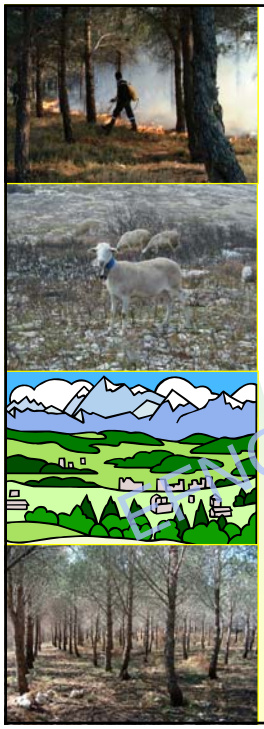

Various applications of prescribed burning

- Fire management
- Rangeland management
- Landscape management and conservation
- Forestry

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Fire management

Fuel control on fuel breaks


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Fire management
Forest stand self protection


Fire management
Training of fire fighters
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Fire management
Fire ignition limitations
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Rangeland management
Grazing improvement
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Prescribed burning for conservation: an increasing demand

- Fuel management is often considered as detrimental to conservation purposes
- But prescribed burning is more and more used for landscape management and conservation purposes

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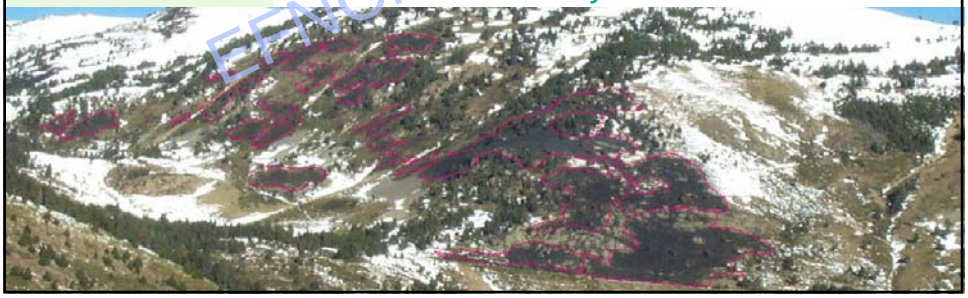
Prescribed burning and biodiversity

- Prescribed burning opens vegetation communities and creates discontinuities in landscape
- Mixing of open areas and closed shrubby and woody islands is the best microstructure favourising species of highest conservation values
- Highest number of plant species 3-4 years after low or moderate intensity fire



Knowledge of fire effects is a key for good prescription

- Prescribed burning modifies vegetation structure and composition…
  …and then impacts wildlife:
  - Immediate effects
  - Post fire processes
- Fire impacts on fauna depends on:
  - Fire regime
  - Animal species and their conservation level
  - Population characteristics
  - Time since last fire
  - Type of vegetation burnt

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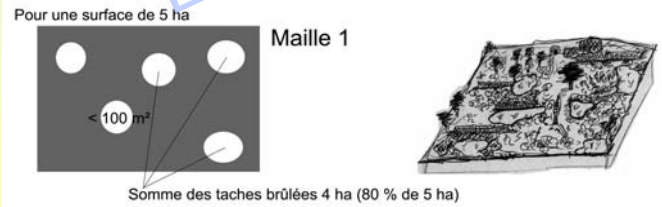
Prescribed burning increasingly considered in conservation documents

- Natura 2000 (Pyrenees, Mont Ventoux, Luberon Natural Park)
- Life programs
- Management plans with conservation objectives



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… along with increasing efforts for scientific monitoring

- Fire effects on various groups of fauna
  - Birds:
    - Pray birds eg. Bonelli eagle [de Maupoué & Zéraia 2005]
    - Passerine birds [Roura i Pascual 2002, Pons et al 2003, Blanc 2005, Yallop et al 2006],
    - red-legged (*Alectoris rufa*) and rock (*A. graeca*) partridges [Ponce-Boutin 2002, 2003, Bernard-Laurent 2005, Novoa et al 2006],
    - red gouse (England) [Yallop et al 2006]
  - Mammals:
    - *Ovis gmelini musimon* [Babski et al 2004]
  - Reptiles:
    - *Vipera Ursinii* [Prodon 2002]
  - Insects:
    - Orthopters [Puissant & Prodon 2002]

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Conclusions and perspectives

- Prescribed burning is a powerful technique for conservation management
- Animal species responses to prescribed burning are multiple and complex
- … and must be assessed on the perspectives of both spatial and temporal dynamics
- Specific studies and monitoring must be founded to improve knowledge
- Towards a suitable fire regime for each conservation area
- … with positive feed backs on fuel management practice.

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