HAL
open science

The “ Groupement Forestier des montagnes particulières de Hèches ”: a case from the mountains of southwestern France

Laurent Larrieu

To cite this version:

Laurent Larrieu. The “ Groupement Forestier des montagnes particulières de Hèches ”: a case from the mountains of southwestern France. How to balance forestry and biodiversity conservation? A view across Europe, Nov 2020, virtual event, France. 13p. hal-03016638

HAL Id: hal-03016638

https://hal.inrae.fr/hal-03016638v1

Submitted on 20 Nov 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

The « Groupement Forestier des montagnes particulières de Hèches »: a case from the mountains of southwestern France

Laurent Larrieu

INRAE Dynafor
CNPF-CRPF Occitanie

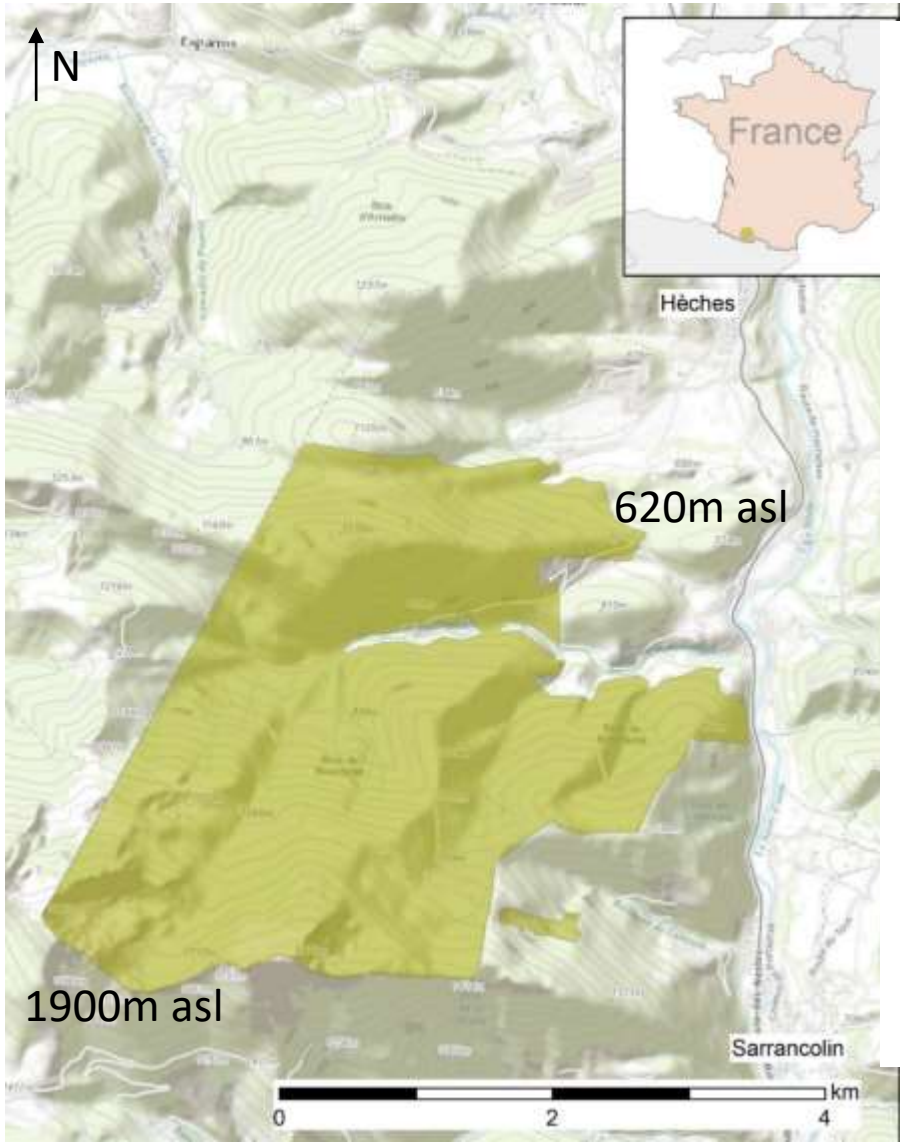
How to balance forestry and biodiversity conservation? A view across Europe, 09th-11th Nov. 2020

A montane beech- and beech-silver fir-dominated forest

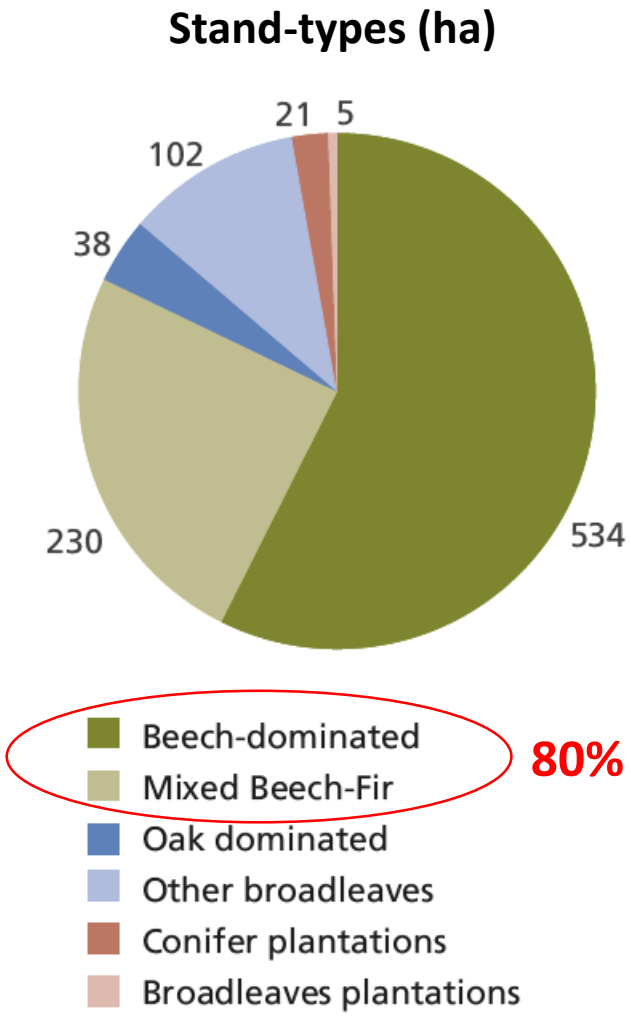
- **Total area 1202 ha**
- 930 ha forest
- 272 ha subalpine meadows

- **Atlantic-mountain macroclimate**

- **19 geological substrata**



S. Ladet



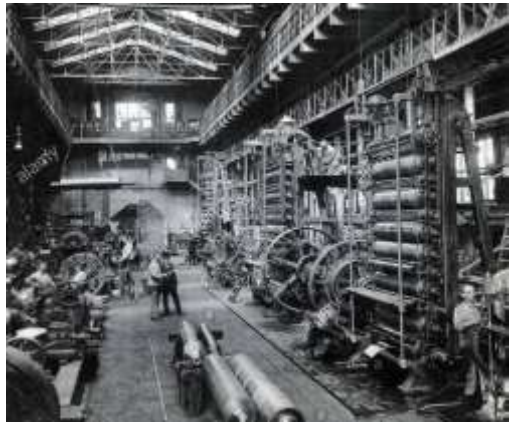
An ancient forest in a landscape used by humans for millennia

-16,000y BP
Magdalenian settlements

-5000y BP
Pastoralism

1750
Remaining forest

1600 →1943
Charcoal production

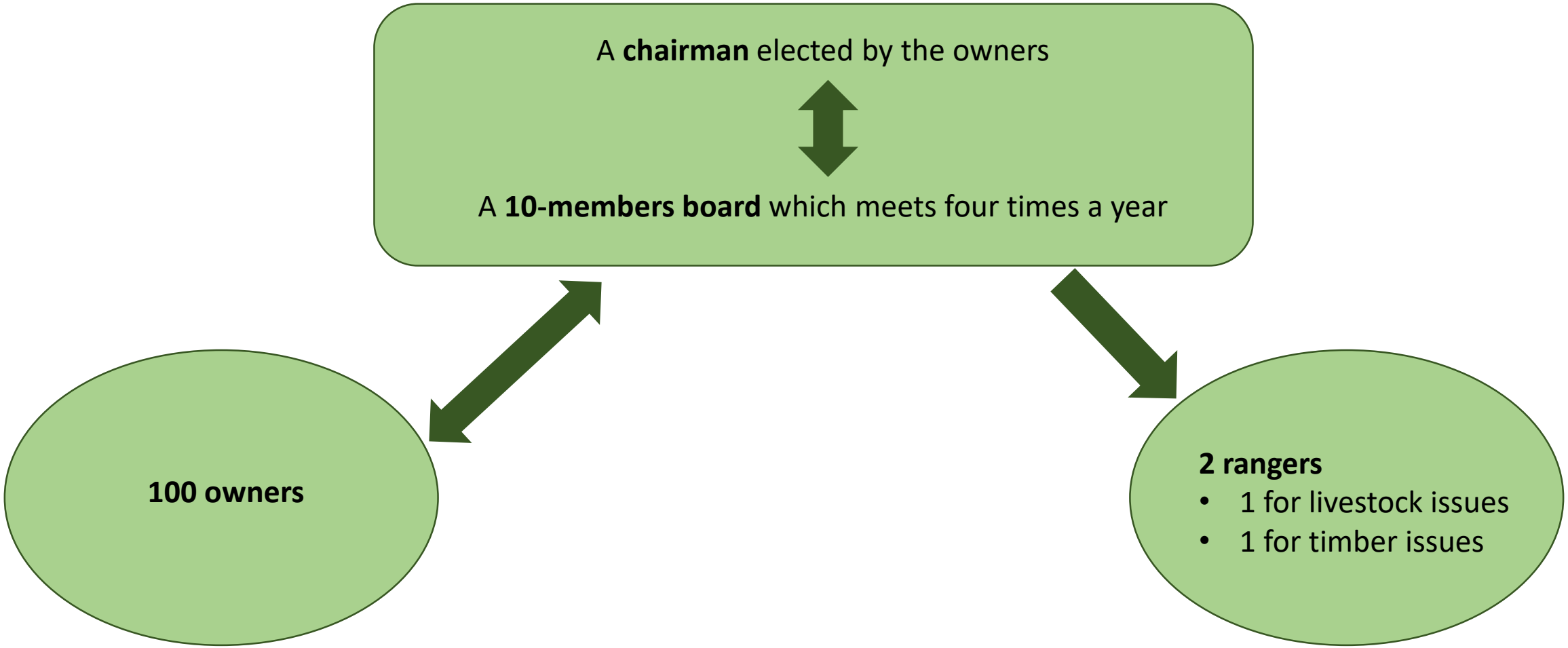


19th
The owner owns steel mills

1860
Local farmers buy the property for livestock requirements

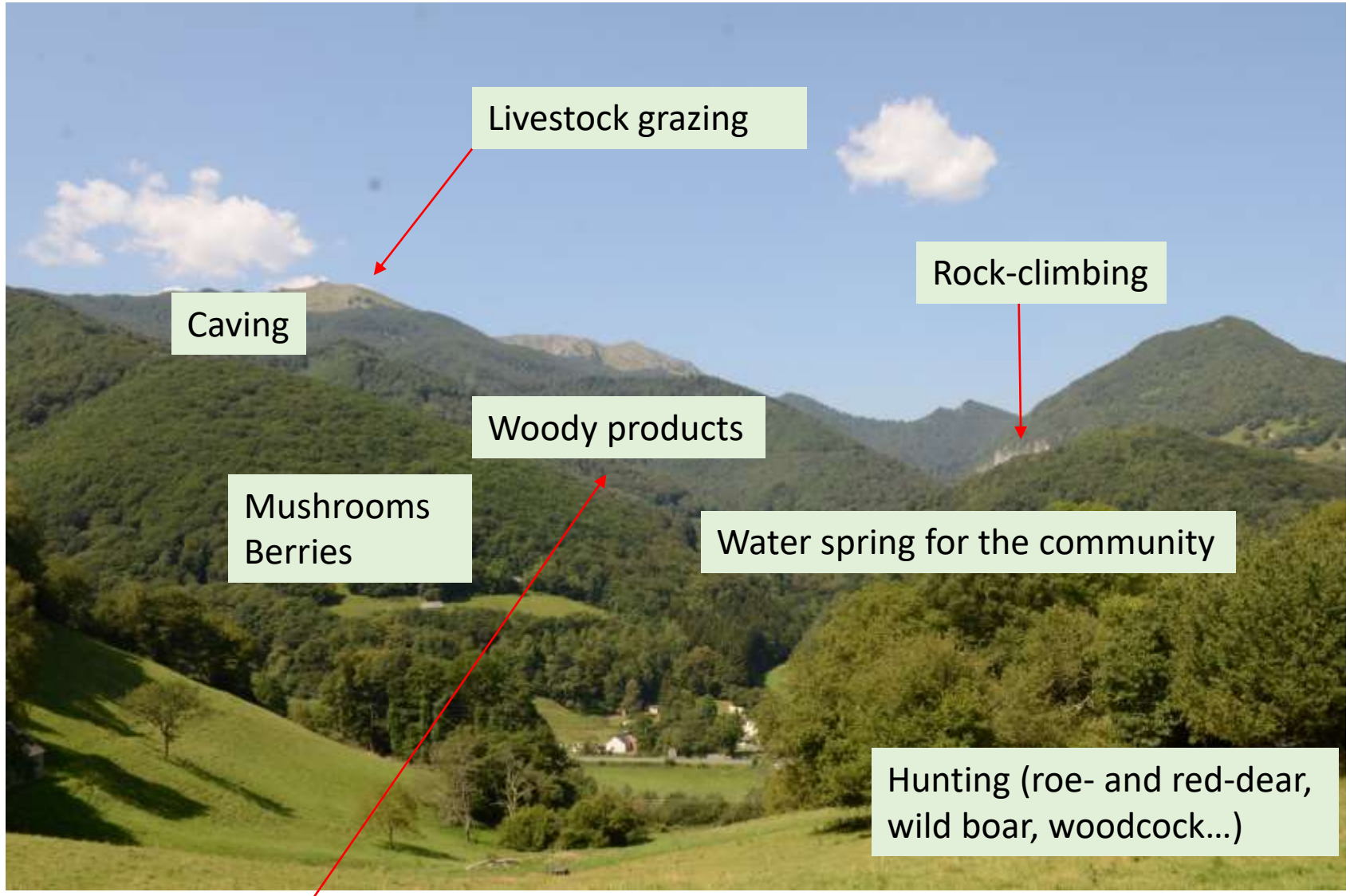
1980
The owners focus on timber production → Setting up of a 45 km road network for trucks

An property owned by 100 people and collectively managed



Once a year, a meeting gathers all the members of the ownership group and the main strategic guidelines are discussed and then approved.

A property managed with several purposes

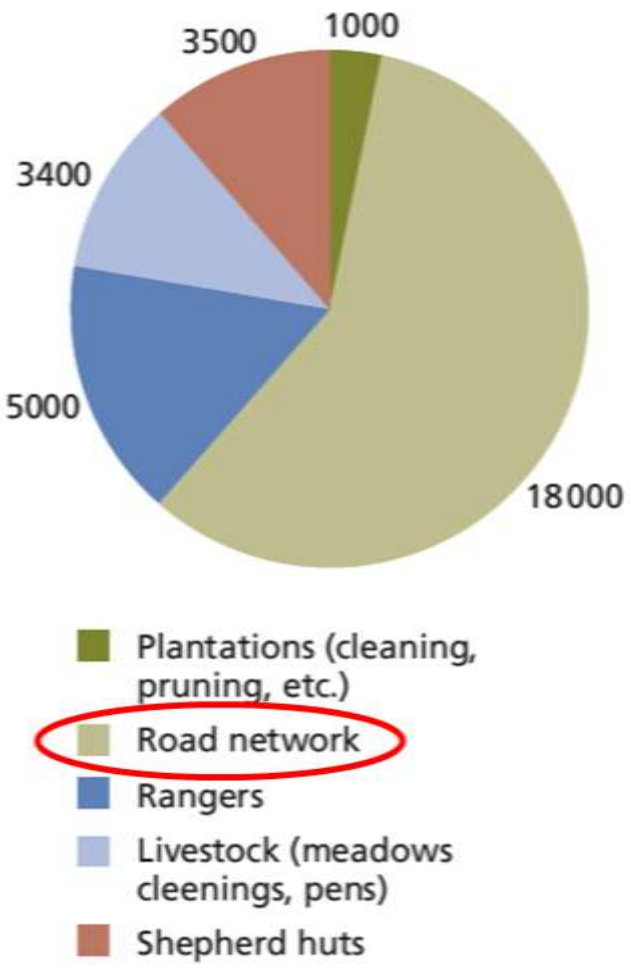


About 6000 m3/y of timber harvested + 120 m3/y of fuelwood for the owners

Woody products are always the main income while road-network is currently the main expense

Incomes (€/y)

Expenses (€/y)



A study field since 2000: toward an adaptative management…

- **Studies focusing on the property**

Bull. Soc. Linn. Bordeaux, Tome 145, (N.S.) n°38 (4) 2010 : 397-416.

Contribution à la connaissance des Coléoptères saproxyliques des forêts pyrénéennes (3ème note : la forêt de Hèches, Hautes-Pyrénées)

Antoine BRIN, Hervé BRUSTEL, Lionel VALLADARES
Université de Toulouse, École d'Ingénieurs de Purpan,
75, voie du T.O.E.C., BP 57611, F-31076 TOULOUSE Cedex 3
&
Laurent LARRIEU
INRA, INPT/ENSAT, UMR1201 DYNAFOR, F-31326 Castanet-Tolosan,
et CRPF de Midi-Pyrénées, F-65000 Tarbes

Eur. J. Entomol. **112**(4): 755–769, 2015
doi: 10.14411/eje.2015.083
ISSN 1210-5759 (print), 1802-8829 (online)

Hoverfly (Diptera: Syrphidae) richness and abundance vary with forest stand heterogeneity: Preliminary evidence from a montane beech fir forest

Laurent LARRIEU[1,2], Alain CABANETTES[1] and Jean-Pierre SARTHOU[3,4]

Prise en compte de la fragilité chimique des sols forestiers dans les conseils de gestion. Illustration pour une sapinière-hêtraie montagnarde sur roche acide (Vallée d'Aure, Hautes-Pyrénées)

Laurent Larrieu - Claude Nys - Bernard Jabiol

…

- **A sampling field site for wider purposes**

Documents Mycologiques - Tome n°XXXIV - Fascicule n°135-136 - octobre 2008

Étude mycocoenologique de la hêtraie sèche à *Sesleria caerulea* (*Cephalanthero-Fagion*), des Pyrénées centrales.

par Gilles Corriol* et Laurent Larrieu**

Forest Ecology and Management 334 (2014) 163–173
Contents lists available at ScienceDirect
Forest Ecology and Management
journal homepage: www.elsevier.com/locate/foreco

Deadwood and tree microhabitat dynamics in unharvested temperate mountain mixed forests: A life-cycle approach to biodiversity monitoring

L. Larrieu [a,b,*], A. Cabanettes [a], P. Gonin [b], T. Lachat [c], Y. Paillet [d], S. Winter [e], C. Bouget [d], M. Deconchat [a]

Insect Conservation and Diversity
Insect Conservation and Diversity (2020) doi: 10.1111/icad.12434

The use of sentinel logs to assess host shifts in early beetle colonisers of deadwood under climate- and forestry-induced tree species substitutions

CHRISTOPHE BOUGET,[1] ANTOINE BRIN[2] and LAURENT LARRIEU[2,3] [1]INRAE, UR EFNO, Nogent-sur-Vernisson, France, [2]Université de Toulouse, INRAE, UMR DYNAFOR, Castanet-Tolosan, France and [3]CRPF-Occitanie, antenne de Tarbes, Tarbes, France

…

A wide range of habitats leads to a high biodiversity

374 species of beetles

Denticollis rubens (Photo Bense)

104 species of hoverflies

Cheilosia fasciata (Photo Sarthou)

17 species of bats

Tadarida teniotis (Photo Arthur)

Several rare plants and mosses

*Ramonda myconi (*Photo Largier)

Buxbaumia viridis

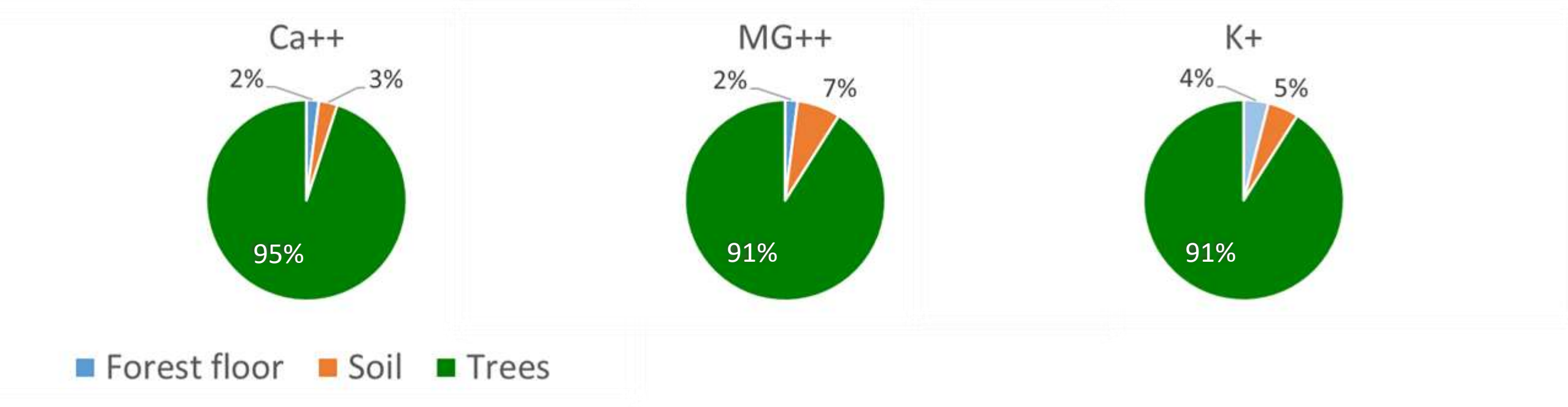
Pyrenean endemic spider

Harpactocrates ravastellus (Photo Dejean)

Pyrenean endemic bird

Tetrao urogallus subsp. aquitanicus

Highly acidic and nutrient-poor soils are a cause for concern



About 5% of the forest area

Podzosols & Alocrisols analyzed by REGESOL (Larrieu et al. 2006)

Four examples of integrated management measures applied

- Stopping logging when soils are very nutrient-poor
- Retention of whole unharvested crowns when far from the road
- Time-lagged of a harvesting operation while *Accipiter gentilis* nesting
- Retention of low-yielding oak-dominated stands

A key site for training

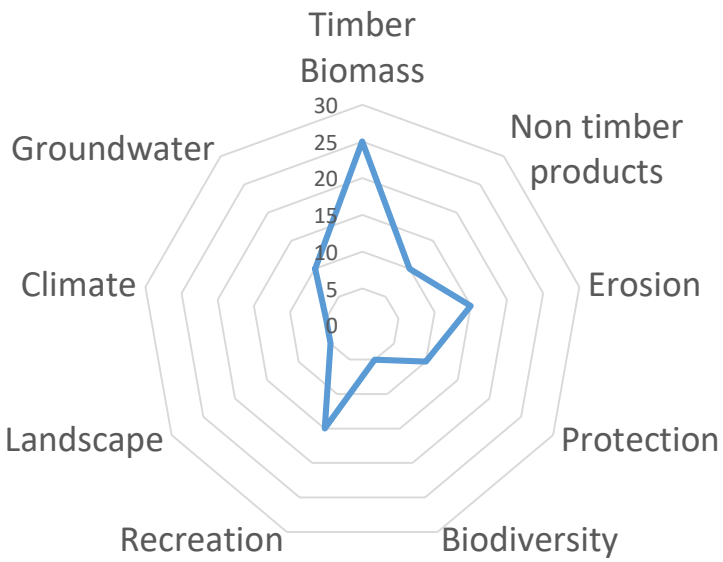
- Local studies and references
- Wide range of substrata, habitats and soils
- Biodiversity issues
- Multifunctional management

- Students
- Forest managers
- Private owners

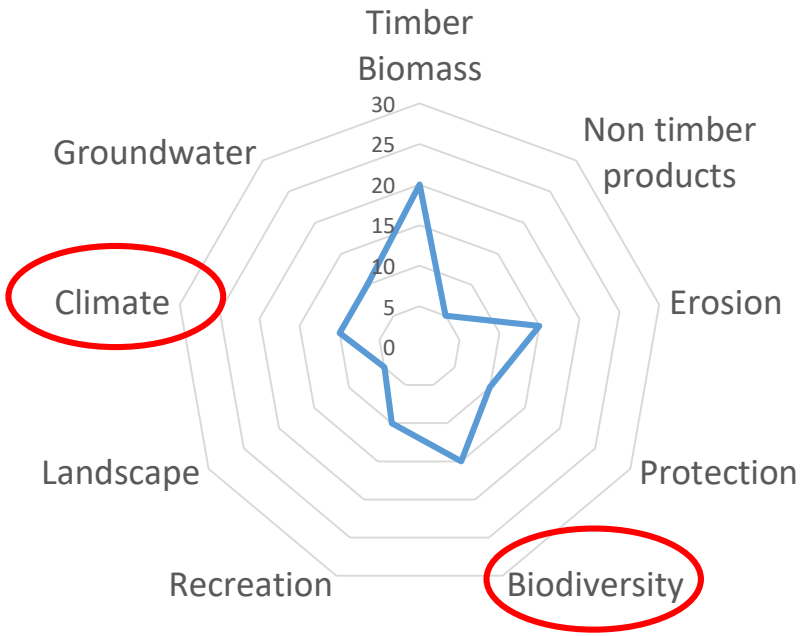
Toward an even more biodiversity-friendly management: setting up a marteloscope for training both board members and rangers

An ongoing strategy to take better account of biodiversity and climate change

2020



2030 ?



Thanks for your attention!