



# WILDLAND FIRES AND FIRE USE IN SPAIN: A HISTORICAL PERSPECTIVE



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## PREMISES AND HYPOTHESES

- The lack of references to wildland fires in historical documents until the 19<sup>th</sup> century is due to the fact that they weren't a socio-political worry at the time. However, abundant references to problems involving woodcutting and hunting can be found in historical documents, while wildland fires are scarcely mentioned.

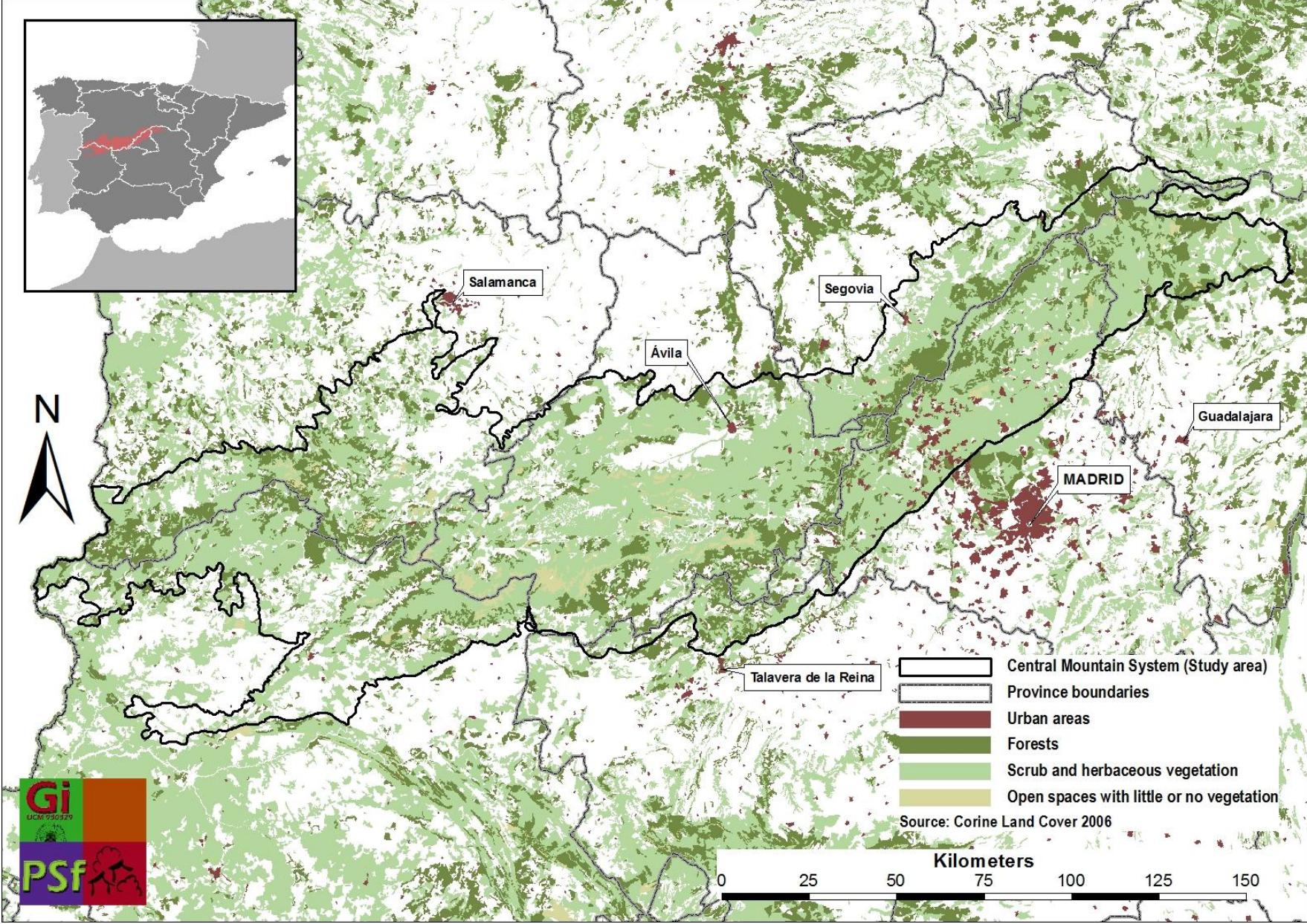


Wildland fire, 1974 (Spanish Forest Photography Archives, AGB-INIA)



Coal production on the banks of the river Ebro (Rasquera, Tarragona)

- The use of fire has historically been a common practice for land management (for renewing pastures, ploughing, burning weeds and stubble) and the rural culture of fire avoided the catastrophic manifestation of wildland fires.
- The socio-economic changes and socio-political conflicts that occurred during the 19<sup>th</sup> century raised the risk of ignition and worsened the problem regarding wildfires. Besides, the organisation of Forestry Authorities in the middle 19<sup>th</sup> century also entailed the increase and improvement of the wildland fire records.



## SOURCES OF HISTORICAL INFORMATION

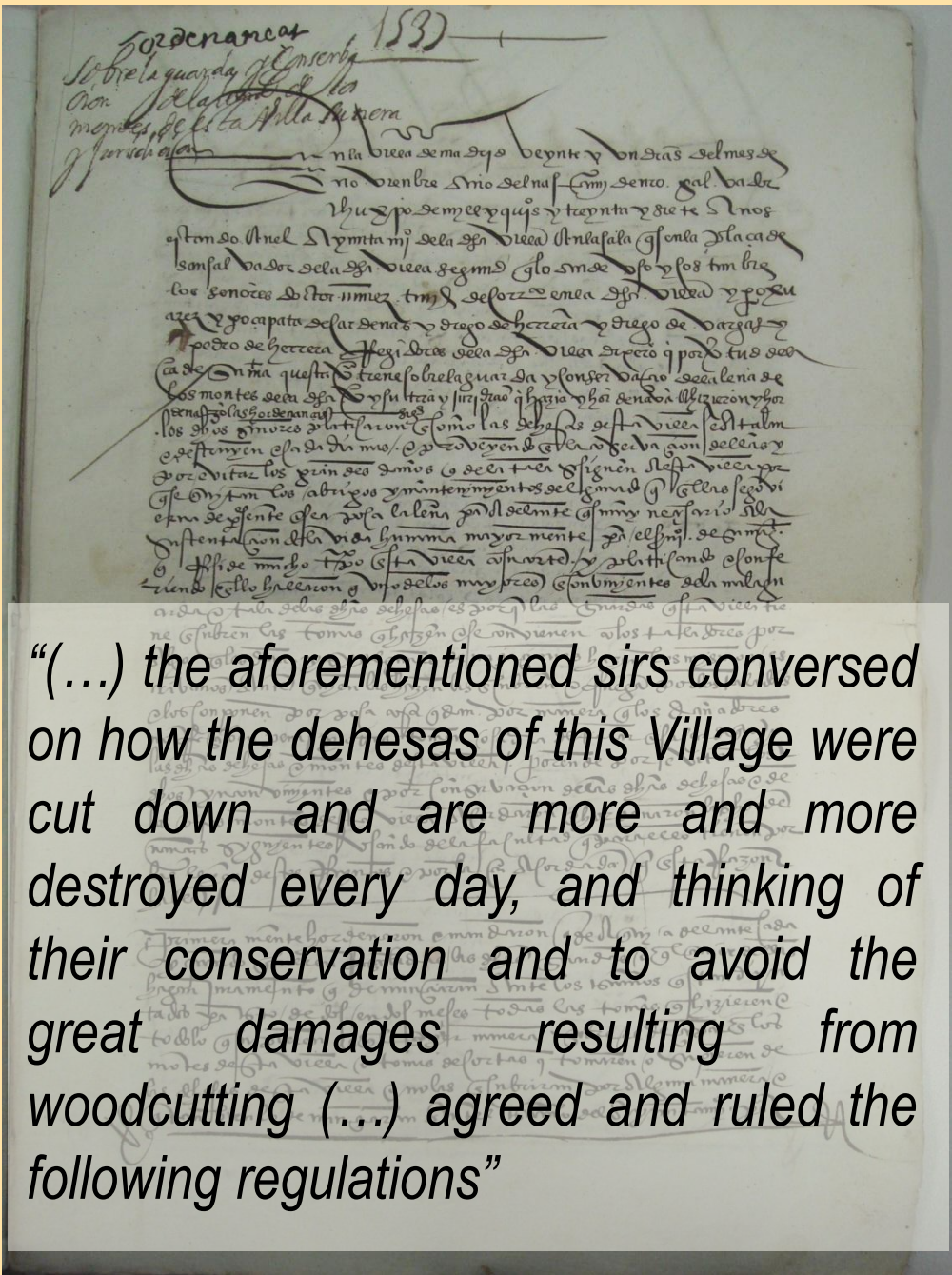
### ARCHIVES OF THE FORESTRY AUTHORITIES:

- General Administrative Archives of Spain; Archives of the Ministry of Agriculture, Fisheries and Food; Archives of the Regional Forestry Authorities; Archives of the Ministry of the Environment and Rural and Marine Affairs.

- Information on wildland fires from the early 19<sup>th</sup> century: forest management plans, files on public forests, reports on wildland fires.

### NEWSPAPER ARCHIVES:

- Spanish National Library and Newspaper Archives: official journals and newspapers of the date; bibliography.
- Records of wildland fires from the 19<sup>th</sup> century (1846-1929).



Regulations of Madrid, 1537: penalties and sanctions for actions that harm the forests. (Archives of the Village of Madrid)

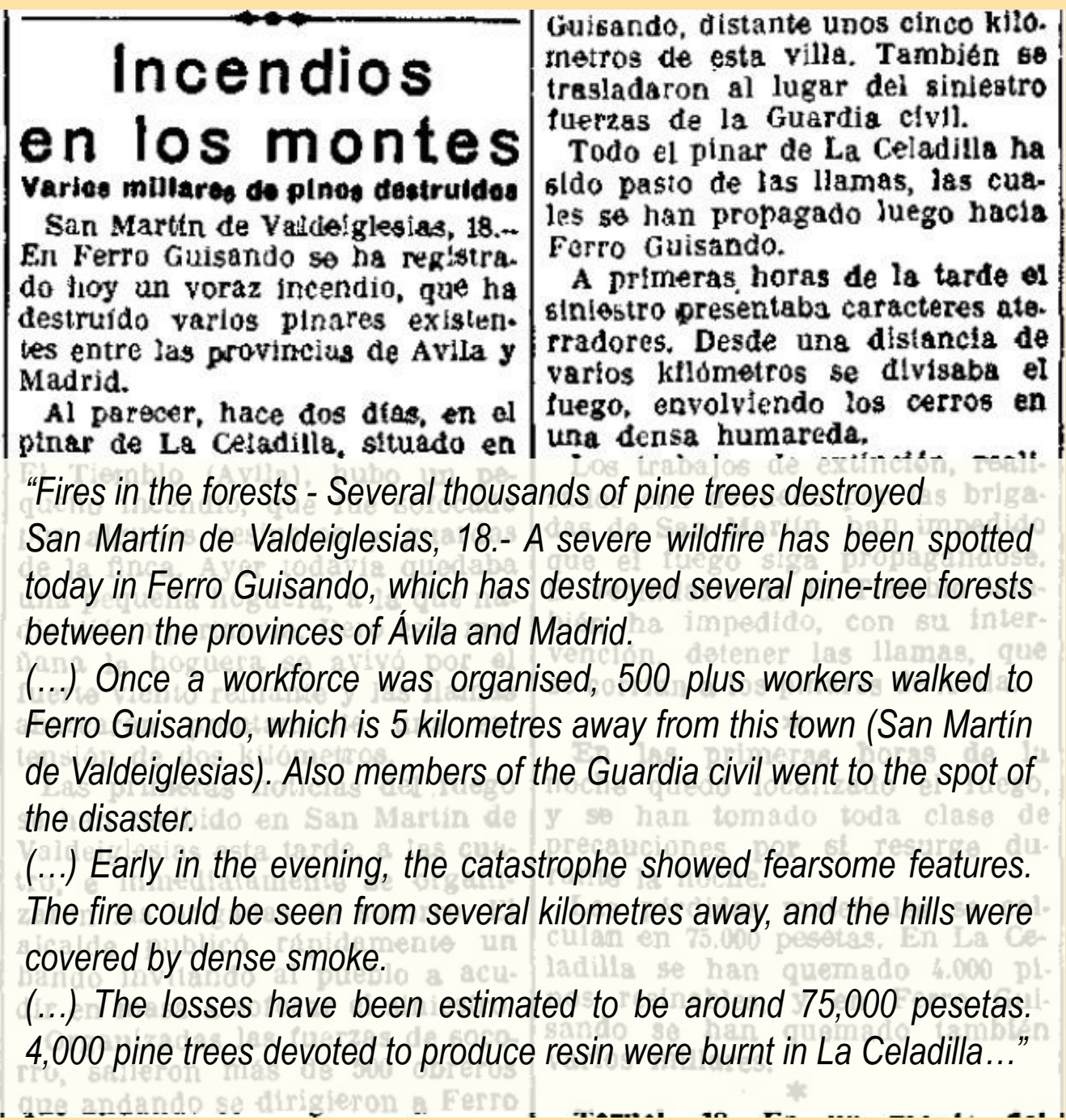
### HISTORICAL ARCHIVES:

- National Historical Archives; General Archives of Simancas; General Archives of the Royal Palace; historical archives of the Regional and Provinces Government; Archives of the Village of Madrid, private archives (i.e.: House of Alba).

- Information on wildland fires and fire use from the 19<sup>th</sup> century: regulations, reports and rulings, correspondence and administrative files, bibliographical sources.

### MUNICIPAL ARCHIVES:

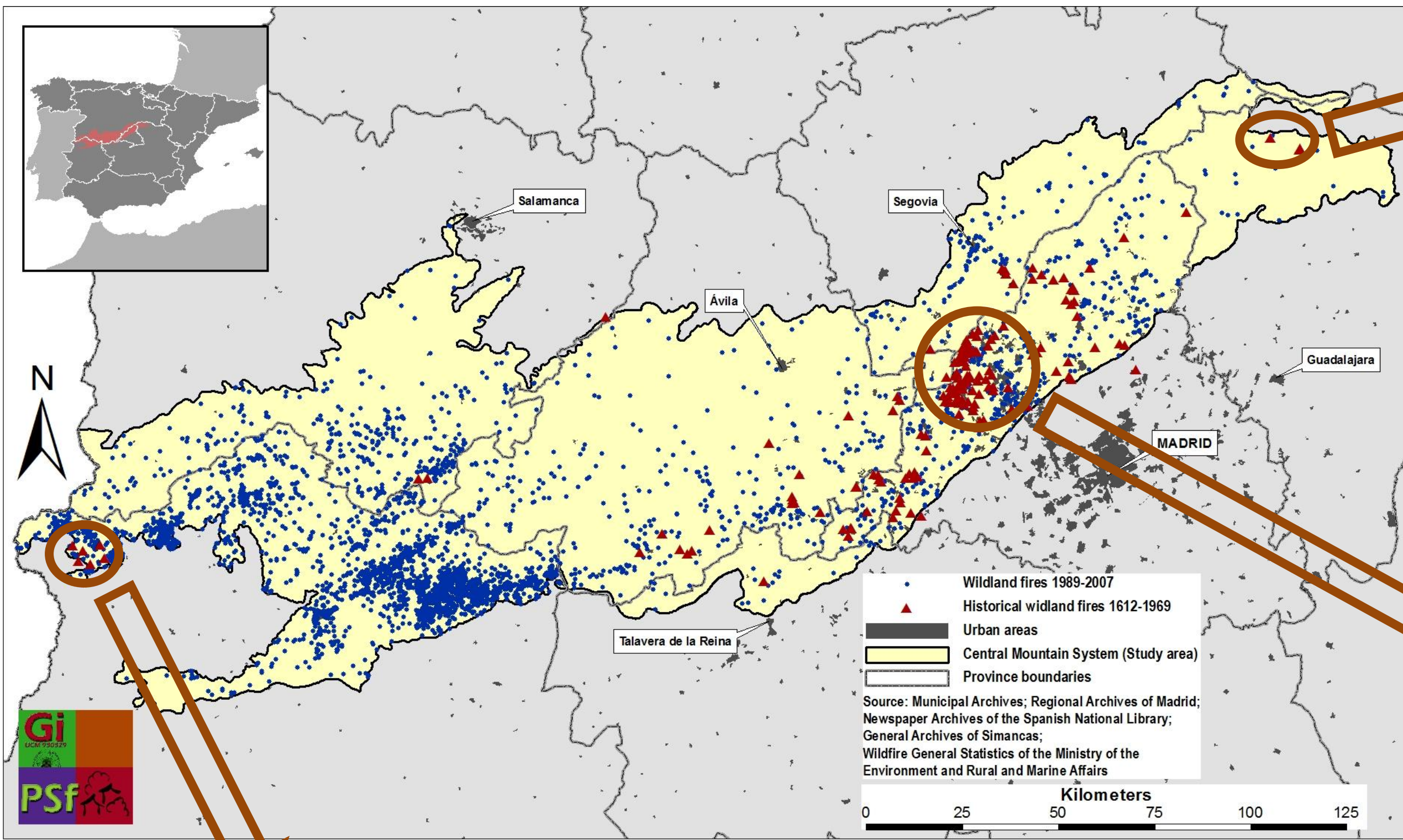
- Information of wildland fires and fire use from the 17<sup>th</sup> century: town hall plenary meetings minutes; correspondence and files; regulations, reports; administrative files on forest use.



La Libertad, 19<sup>th</sup> August 1931, page 2. (Digital Newspaper Archives of the Spanish National Library)

## RESULTS

- First results (January to July 2011) of the national research project “Historical geography of wildland fires in Spain: Central Mountain System” (2011-2013), which aims at documenting and analysing the wildland fire regimes that have existed since the 12<sup>th</sup> century.
- The forest landscape of the historical fire-prone areas is very diverse, depending on the local ecological conditions and the past fire regimes.



### Large wildland fire in the Sierra de Gata mountain range, 19th century



Author: C. Montiel

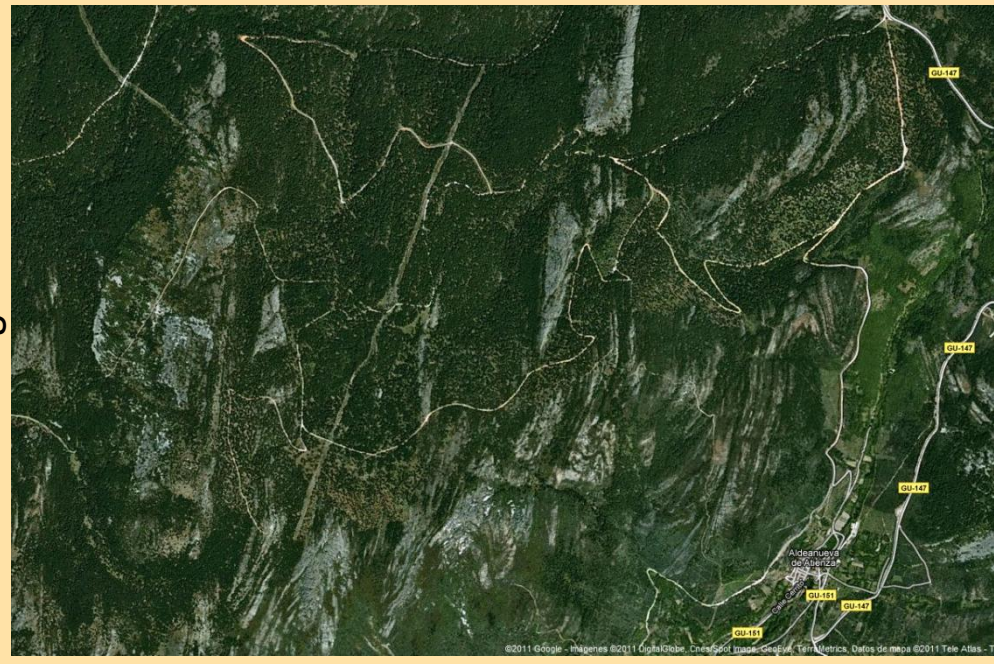


Author: C. Montiel

Several events of severe wildland fires were recorded between the 18<sup>th</sup> and 22<sup>nd</sup> of August 1881, in cork-oak *dehesas*, affecting large areas and causing significant economic losses. They probably were consequence of an extreme meteorological event. It is a fire-prone area, with a landscape adapted to the recurrent presence of fire.

"The mayor of Villamil communicates me that on the 18<sup>th</sup> of the present month, the *dehesas* of Sierra Cudrasa, of that municipality, appeared burnt. The fire had spraded throughout 36 hectares, being the losses caused relatively insignificant. The fire recurred the following day in the *dehesa* of Sierra Albilla, where 110 plus hectares were burnt, losses were also scarce..." (La Epoca, Madrid, 24/08/1881)

### Small wildland fire recorded in 1883 in the mountains of Guadalajara



Author: L. Gallana

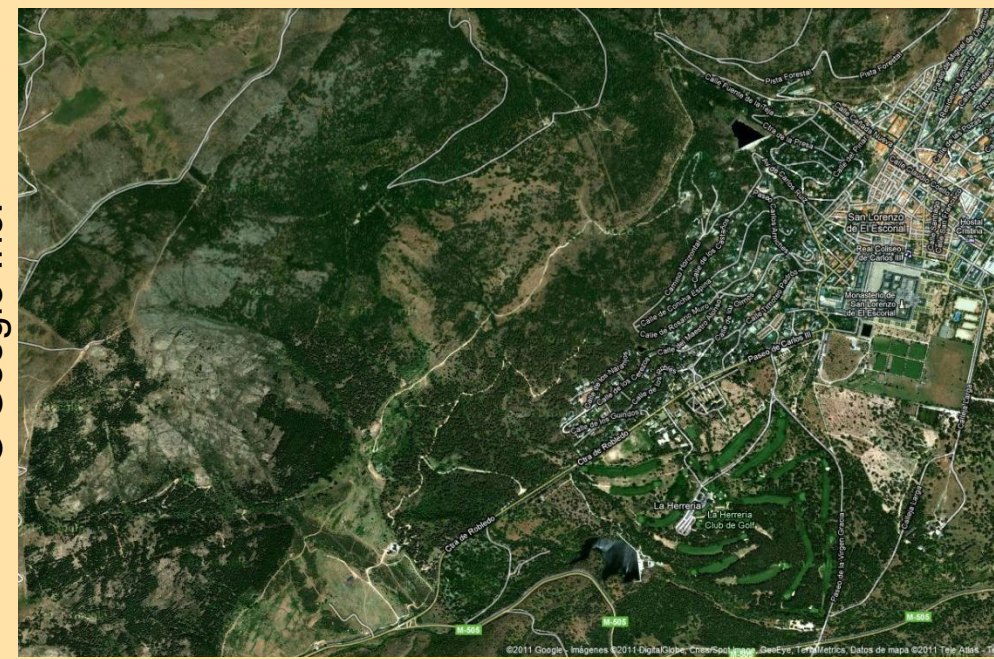


Author: C. Montiel

Despite its small extension (1 ha), it was recorded for it was a planned forest, property of the municipality, much important for them and the Forestry Authorities. The continuity of forest management allowed the conservation of the traditional rural landscape, characterised by the mass of *Pinus sylvestris* on the upper areas (1,600-1,700 m.), on the *dehesa* boyal (*Quercus pyrenaica*), that extends beyond the town's agricultural land.

"The governor of Guadalajara informs that there has been a wildfire in Aldeanueva de Alienza, in the pine-tree forest property of the municipality, estate called Los Boyales. One hectare of land containing small and middle-sized pine trees was burned." (Diario Oficial de Avisos de Madrid, 22/09/1883)

### Long historical series of wildfires from 1612 on in the forests of El Escorial (Madrid)



Author: L. Entrenas



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The records of wildland fires in these forests is rather long and ancient for they were highly guarded and managed Royal Forests. All the events that occurred have been documented. During the 17<sup>th</sup> and 18<sup>th</sup> centuries, these were mainly due to fire used in agricultural and livestock-breeding duties escaping beyond control from the nearby estates. In the late 19<sup>th</sup> century, the number and recurrence of conflict-driven intentional wildfires increased. Nevertheless, it isn't a fire landscape but a well conserved broad-leaved forest.

"*dehesa del quejigar* (...) completely burnt (...) damage worth one hundred thousand plus ducats (...) evergreen oaks, ashes, and cork-oaks (...) it started at Las Colmenillas (...) in ploughed land with little forest (...) the *dehesa* got burned for no one went there to extinguish the fire (...) which started in a private vineyard ..." (El Escorial Municipal Archives, Criminal Justice, 22/08/1615)

Province	Number of events	Documented* burned area (ha)	First/last date of the record
Ávila	19	305	1881-1940
Cáceres	6	136	1881-1887
Guadalajara	3	1	1883-1919
Madrid**	129	2175	1612-1969
Salamanca	3	0.3	1881-1896
Segovia	6	0.5	1863-1933
Toledo	2	4	1881-1891
<b>TOTAL</b>	<b>168</b>	<b>2621.8</b>	<b>1612-1969</b>

\* Only for those cases whose extension could be determined.

\*\* Research from January to July 2011 focused mostly on the province of Madrid so that the first results are biased to this area.