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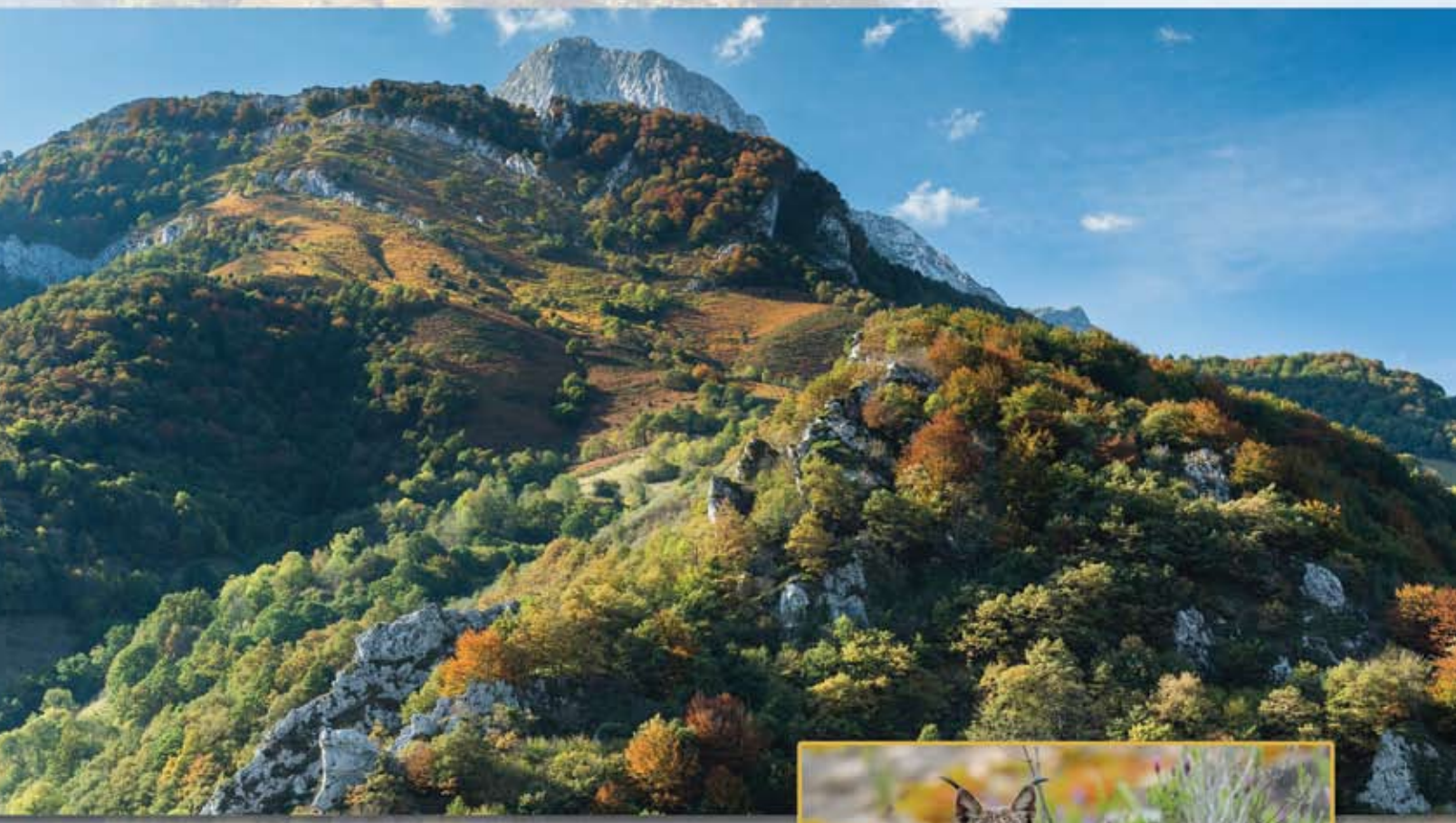

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Rewilding France via Feral Nature

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Protected Areas – Biodiversity More Than Naturalness

France has a network of protected areas composed of national parks and natural reserves. The core areas of the 6 national parks represent 0.64% of the country, and the 372 natural reserves represent 0.31% (Lefebvre and Moncorps 2010). An estimated 1.23% of the French territory is covered by strict conservation measures. In 2009, a new program was established to help meet the next decade at 2% of the territory, including the previous conservation measures. Core areas of the national parks are classified in category II of IUCN; the natural reserves in category IV. Only a few forest reserves are classified in category Ia, and in 2010, about 1.5% of the public forest were integral reserves (category Ia) (Génot and Schnitzler 2010).

In mainland France, protected areas management was until recently focused on biodiversity rather than naturalness, except in some integral forest reserves. This trend to manage protected areas is influenced by the Mediterranean culture, which supports the idea that humans play an essential role in nature (Dudley 2011). References to biodiversity were associated with the harmony and beauty of rural landscapes (e.g., mosaics of meadows, pastures, ponds, and small forests) resulting from traditional agriculture, forestry, and grazing in the 18th and 19th centuries (Schnitzler et al. 2008). The largest French integral forest reserve covers 2,000 hectares (4,940 acres), and another is planned in a new forest national park that is under preparation and will cover 3,000 hectares (7,410 acres). This is less than some protected areas in Romania, with 5,250 hectares (12,968 acres) in the Nera Natural Reserve (Giurgiu et al. 2001), or in Germany in the Bavarian Forest National Park with almost 25,000 hectares (61,750 acres) as wilderness area (Sinner 2010). Fortunately, France has territories overseas, with the largest strictly protected areas for naturalness: a natural reserve of 22,700 square kilometers (8,762 sq. miles) in Antarctica and a national park of 20,300 square kilometers (7,836 sq. miles) in Guyana.

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In mainland France, as in most of western Europe, human activities for centuries have modified the natural landscape with agriculture, forestry, hunting, fishing, industrial development, building, transportation, and energy production. In fact, unmodified natural landscapes do not exist across large areas in Europe, and particularly not in France. It is a myth to think of primeval or pristine nature in Europe; however, to quote the ecologist Nigel Dudley, "Cultural landscapes that rely on human intervention are a useful management strategy in crowded, long-settled areas but the idea that biodiversity 'needs' humans is flawed" (Dudley 2011). The end of pristine nature is not an appropriate argument for refusing to implement the concept of naturalness in nature conservation. More than ever, naturalness is a relevant concept in a changing world, but it needs explanation. In Europe, naturalness is a kind of adaptation of the wilderness concept. In eastern Europe, some protected areas of great ecological value can qualify as wilderness, such as the Carpathian mountains of Romania (Stanciu 2008). Wilderness can be seen as having a high degree of naturalness. However, there is much debate on the definition of wilderness applied to the European context (Barthod 2010). Until now, French ecologists understood naturalness as untouched nature and spoke of old-growth forests or their remains (Vallauri et al. 2010). But more and

more, the concept of naturalness incorporates other characteristics, such as unmanaged, dynamic, and uncontrolled nature, which means that naturalness can include anthropogenic heritage, including former land uses or exotic species. Some ecologists speak about ferality and novel ecosystems (Höchtl et al. 2005; Marris 2009). According to Emma Marris (2011): "Novel ecosystems are altered by human activity but are not actively managed"; these alterations can be plantations, pastures, or agricultural fields "then left to go feral". Kowarik (2005) speaks of two types of naturalness: the "retrospective naturalness," with a composition of vegetation that existed before humans changed the natural ecosystems, and the "prospective naturalness," with self-establishing species, including neophytes. The biodiversity concept – a tool of the marriage between science and technology – stresses that nature cannot survive without humans. This concept of naturalness has a land ethic

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foundation that respects autonomous nature as much as possible and is spontaneously inspired by a feeling of nature, including the idea of humility developed by philosophers, artists, and thinkers such as Aldo Leopold, Arne Naess, Henri-David Thoreau, and Robert Hainard.

Something has changed in the world of the French conservationists during the last decade. Management of biodiversity was criticized from scientific, economic, and ethical points

Figure 1 – The pass of the Allier River in central France where the forest came back after earlier grazing activity. Photo by Jean-Claude Génot.

of view (Génot 2008). Some ecologists began to realize the importance of naturalness, in particular, in the last old forests of the "green" eastern range of France (mountains of Vosges, Jura, and the Alps). Two important meetings organized by WWF (World Wide Fund for Nature) France included one on deadwood took place in 2004 and one on naturalness of the forest in 2008. An NGO called Wild Forests was created in 2006 to buy forestland and keep it untouched, and also to write a web newsletter, "Naturalness", which has been a success. In the framework of the European Parliament, a report on wilderness areas was adopted in 2009, and an NGO called Wild Europe was created, showing that, more than ever, the question of wild nature and naturalness is taken into account in Europe as well as France.

Fallow Lands: The Novel Wild Nature

While the conservationists' debate between biodiversity and naturalness in protected areas continues in France, the French landscape has been changing and uncontrolled nature is increasing (see Figure 1). There is now fallow land that has been abandoned by farmers over the years, and large areas of fields are returning to forests. In France today there are about 2 million hectares (4.9 million acres) of fallow land that since 1945 have become spontaneous forests (Derioz 1999). These young forests are between 10 and 130 years old, and they were born from events such as war, economic crisis, farmland abandonment, and the European Union agricultural policies. The areas covered by regenerating forests have no comparison with the land used by humans because they are spectacular and concentrated in certain regions, such as the mountains (Alps, Pyrenees, Massif Central) and the Mediterranean portion of the country where they total 2%. This fallow land phenomenon also exists in Europe, and an assessment has been drawn up for each country with trend analyses (Keenleyside and Tucker 2010). The parts of Europe that could be affected

Figure 2 – A new forest with birch and pine in eastern France in what was once a meadow. Photo by Jean-Claude Génot.

by agricultural abandonment are the following: Finland, Sweden, northwest Spain and Portugal, some mountains of Germany including the Czech Republic border, the Apennines in Italy, and possibly the Carpathians.

It is difficult to identify the trend that will occur in the near future. Several predictive models have been developed, with the conclusion that land abandonment will occur on more than 0.7% of the area by 2020 (Scenar 2020 Regionalisation Scenario) and up to 6.7% by 2030 (EURURALIS Global Co-operation Scenario). An average estimation of about 3%–4% seems to be reasonable, which means 126,000 to 168,000 square kilometers (48,636 to 64,848 sq. miles) by 2030.

The ecological consequences of this change in land use in France are numerous (see Figure 2). The spontaneous return of trees and bushes in the Alps leads to several advantages, both for nature and for humans, such as reduced soil erosion, better regulation of water flow, decrease in the occurrence of avalanches, and possible return of more natural and diverse forests, currently reduced by forestry in places accessible for harvesting. Thanks to the agricultural abandonment in the 21st century, natural conditions at the subalpine stage can be found again after having been modified for at least 5,000 years (Schnitzler and Génot 2012).

The new ecosystems, which are a mosaic of meadow, heathland, fallow land and forest, can shelter rare species such as wild vine (*Vitis sylvatica*) in Mediterranean areas and yew (*Taxus baccata*) in Brittany (western France). Some trees that appear in regenerating fallow land bring nitrogen to the soil, such as green alder (*Alnus viridis*) in the Alps and golden chain (*Cytisus scoparius*) in the Massif Central.

Some forests have also returned to floodplains, such as in the Loire Valley, with willow, poplar and many exotic species. Deadwood can naturally accumulate in areas where hardwood forests still remain. Land abandonment has greatly improved the landscape qualities in floodplains (see Figure 3). In some floodplains along the Loire and a few tributaries of the Rhône River in France, along the Rhine in Germany, and in Austria along the Danube, the progression of fallow land has produced a significant mass of stored deadwood on curved banks and islands and within the main channel, restoring the natural river functioning and providing habitats for aquatic fauna (Piegay and Gurnell 1997).

These regenerating forests and fallow lands provide opportunities for nature, through redevelopment of forest soils and the diversity of plants, fungi, animals (e.g., bats, insects, birds), and deadwood, such as in the former chestnut orchards in Ardèche, Corsica, and Cévennes.

Fallow land very quickly reaches interesting trophic levels, sometimes after only 50 years of natural development. In the natural reserve (1,575 ha/3,890 acres) of the gorges of the Ardèche (Rhône-Alpes and Languedoc-Roussillon regions), spontaneous young oak forests show an amazing diversity of saproxylic insects, which are very rare in managed forests. A recent census revealed 186 species of saproxylic beetles, which include the giant capricorn beetle (*Cerambyx cerdo*) and the European stag beetle (*Lucanus cervus*). These forests represent some of the most diverse in France. The return of forest species into the spontaneous forests, such as bats, deer, woodpeckers, birds of prey, and also some carnivores, is a good sign for the future. The flagship species of this return of wild nature in France is the wolf, which came from Italy to France in 1992 and is present in all the "green" eastern mountain ranges and numbered 250 animals by 2012.

For economic and philosophical reasons, fallow land and unmanaged feral nature is seen as a negative condition by rural people and by many

scientists and conservationists (Schnitzler and Génot 2012). As stated by François Couplan, a French ethnobotanist, many of the people are like the farmers during the post-Neolithic period, refusing the concept of fallow land because this means the death of agriculture and a beautiful managed landscape. But something has changed in the minds of the population, because people from the cities agree with the concept of fallow land, and they see this phenomenon as a normal return of domesticated nature to the wild (Guisepelli 2001).

Learning to Love Feral Nature

Before the 18th century, French people accepted fallow land, the remains of the former agricultural system. After the French Revolution, there was a switch in values, and fighting against wild nature was considered a modern movement – in particular, the destruction of wetlands. By World War II, the ecological values of wetlands and less managed agricultural areas were recognized. In the face of the industrialization of agriculture and the decrease in biodiversity linked to the traditional open areas, conservationists made efforts to save patches of managed nature fashioned by agriculture (e.g., grazing, mowing). This conservation strategy did not stop the loss of many species on a large scale, and, without adopting another type of agriculture, these islands of biodiversity are still threatened. At the same time, however, nature continued spontaneously, and many forests were growing without the help or interest of conservationists. It is now time for the third cultural revolution, involving recognition of the ecological, scientific, pedagogical, and philosophical values of feral nature. Feral nature is present in large areas, but until now it has not been taken into account in conservation strategies, and more than ever it is threatened by tree harvesting for energy, building, crops for fuel, and recreational use. We need artists, philosophers, and journalists to speak about the values of feral nature. Conservationists must change the current attitude, which is either to protect the remains of naturalness, or to manage some patch of open land for biodiversity. Feral nature is a balance between naturalness and human heritage, but for some it is not valuable enough to be protected because they see it as a threat to species of open land.

However, feral nature is an opportunity for rewilding France and is a sign of our trust in the future. And today large areas of feral nature already exist. Nature knows better than humans what is best. The strategy for rewilding needs to give nature space and time for the natural recovery process. Within this framework, the conservationists' work should be focused on monitoring, research, learning, and education.

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Figure 3 – A protected area along the Moselle River in eastern France where new forest came back on the bank of the river. Photo by Jean-Claude Génot.

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