

ON FOREST FIRE AND OTHER MISUNDERSTANDINGS

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I'm not too sure that adding more literature to the abundance—too much?—that already exists on the subject of forest fires is a good idea. In fact, the threat of redundancy, of vacuity even, hangs over the question. But there also exists the threat of indifference, against which reiteration is sometimes effective. Voltaire says that he said he repeated himself but nobody took any notice. In the question of forest fires it is obvious that they take no notice (they, who, everyone?) and maybe for that reason one should repeat oneself (one, who, a few?). In any case, let it be understood that there is too much literature—literary creation, I mean—and not enough research, reflection or management.

I imagine that the reader is acquainted with the matter, that he reads newspapers, sees and listens to news programmes and all these things. I shall therefore avoid mentioning the scandalous—but trustworthy?—statistics regarding the number of acres* burned and the desperate civilian lamentations, though it is true these come from the

depth of the heart. I will take as a starting point the fact that we have a serious problem, that we have to find its causes and look for solutions. And to implement them, to use a fashionable expression. Fire shares its history with the Mediterranean vegetation. It has helped to shape it, the same as any other ecological element. However, its powerful and drastic apparition from time to time is quite enough for its effect to be felt. Now it is becoming a torment because of its frequency out of all proportion: the gravity of its effects stems far more from the quantity than the quality. A large part of the woody plants of the Mediterranean are either capable of recovering after the fire or else have seeds which are not affected by fire. When an area has been burnt, the vegetation is restored by the same species (either the next generation or the affected plants themselves). The dialectics of nature make for different vital strategies amongst biological species, but a common factor to all Mediterranean ligneous plants is the inclusion of fire as a conditioning element of their environment.

The observation of burnt Mediterranean woodland in the months after the fire is very enlightening in this sense. The cork trees, if there were any, rebuild their crowns, the vital part of the trunk having been protected from the heat by the insulating layer of cork. The oaks, the mock-privet, the heather and many others tend to sprout from the stump. The rock-roses or the pines themselves—which, nevertheless, die in the fire—soon germinate from the countless seeds, seeds which are almost incombustible inside their woody sheaths (pine-seeds, capsules), and grow quickly. Twenty or thirty short years—nothing by nature's standards—are usually enough for the forest to recover; in the case of maquis or scrubland even less time is necessary. During the early phases, the fast-growing species are at an advantage, so that the fire in fact favours them indirectly. These rugged species that grow quickly, often "suspiciously" containing combustible elements such as resins and essential oils, are known as *pyrophytes* (fire-plants), an inexact term since all Mediterranean vegetation is more or less

pyrophilous (or, rather, pyroresistant). Perhaps it should be pointed out that too much has been said about the pyrophilous nature of pines, compared to a marvellous supposed incombustibility of the oaks and related species. It is true that pine-forests burn more quickly, but it is wrong to think that the oaks are unaffected by fire. The oak-forests, compared to the beechwoods, are like gunpowder (and the Mediterranean pinewoods are dynamite). All the vegetation of the Mediterranean is pyrophilous, all the woody species of the Mediterranean are, to a greater or lesser extent, pyrophytes, because all are able, more or less efficiently, to perpetuate themselves after the fire. After so many thousands of years of forest fires, if there have ever been pyrofugal woody species in the Mediterranean, they have become extinct (or almost). This obvious fact must be got across urgently, since a hasty interpretation of incipient scientific hypotheses has created an excessive and unjustified crusade against the pine on the part of some ecopatriotic spirits.

The occasional presence of fire has consolidated pyroresistancy, but this does not explain the cause of the fire. Originally, it must have been due to fortuitous and infrequent natural phenomena—lightning, for example. If the vegetation is damp, as with wet wood, it is very difficult for the flames to spread. But the Mediterranean summer is hot and dry. July and August are dry months, but September/October or April/May are not. The total annual rainfall (500/700 mm) maintains a good plant population, nothing like the misery of the desert. But it is woody, dry-leaved vegetation; soft grasses or turgid leaves, which would survive all year with a “good administration” of these 500/700 mm of water, cannot beat the dry summer barrier. It is then—and, to a lesser extent, during a second dry period in winter—when the chance spark becomes a raging fire. For this reason, fire is part of Mediterranean history.

Faced with this information, one might ask oneself the reason for the present alarm. In fact, it has already been stated earlier: the *frequency* of fires. If the same individual plant is burnt several times, for example, it does not seem likely that it will be able to go on sprouting indefi-



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nitely; neither can a cork tree renew all its foliage every two or three years: if there are so many fires, and the same areas are burnt so often, the modest twenty or thirty years mentioned above can become an impossible target. Also, the animal species are never pyrophilous, and their chances of escaping can disappear, even in the few fast-moving species, since they will have nowhere to go. There is also the question of the soil, which can suffer deteriorations due to repeated fires and, worse still, straightforward erosion. And finally, the ecologically irrelevant question, though one of great importance for us, which concerns our interests as inhabitants of the country: we neither wish nor is it good for us, to live surrounded by ashes or meagre sprouting thickets, even if they are a future guarantee of new forests (or of new infernos...). The subject of frequency also affects the subject of what action to take after the fire. To trust in the process of self-recovery of the burnt areas is sensible, cheap and ecologically sound when the percentage of forest destroyed is small. But if it is large, one has to think of accelerating the process artificially. Invariably, the solution has been to plant pines, and rightly so because, as we have seen, they are hardy species that grow quickly. Whether they are native to the area to be reforested or whether the area belongs to

the oaks is an academic discussion of limited interest: in the end, the vegetation will impose its own natural law. But when fires occur with such frequency, it is obvious that pines are not the best choice as they burn too easily. And replanting with oaks is not a good solution as they grow too slowly (assuming that the seeds or small saplings, planted on open sunny ground, manage to grow at all). It seems, then, that there is very little one can do, and yet something obviously has to be done. We are faced with a serious ecological problem.

What do we expect from the health authorities in answer to AIDS? Leaving aside metaphysical prattling, we expect them to reduce the suffering of those affected, try to stop the spread of the disease and, above all, to encourage and support research. I see fire as our forest AIDS. We have to start by admitting that our knowledge on the subject is limited, that we are the carriers (because the fortuitous flash of lightning is now a myth) and that we are encouraging it with woodland that seems made to measure. This last point is very important. We have tampered with our forests for centuries, because they supply—or supplied—us with coal, firewood and timber. They lost their impenetrability, probably their principal defence, but there were people to watch over them. These people who lived off them and in them—not many—have moved to urban areas; on the other hand, the forests now receive avalanches of city people who are unaware of their basic characteristics, and this happens precisely in summer. The public sector remains more or less indifferent, since 80 % of Catalonia's woodland is privately owned. It occupies unrewarding areas, mountainous land, land unwanted by agriculture, less productive land, where transport is difficult (also true when it comes to fighting fires). A destitute space, abandoned, unproductive in terms of money, massively visited and so fragile in summer, praised by all and not attended by anyone, is without doubt, a space to reconvert. ■

* In 1986, 270 sq. m. of scrub and woodland were burnt in Catalonia. This represents 0.3 % of the country's surface area and just over 1 % of the forest cover.