

INTEGRATING PAST AND FUTURE

By: Leiba Chaya David

After a week of snowstorms throughout Israel, visiting the Carmel in mid-January was like traveling to another country. There, spring flowers were beginning to blossom, the sun shone warmly on the rocks, and a general feeling of regeneration filled the air, one that brings hope for an area that has, over the past four years, experienced significant environmental drama in the wake of the December 2010 Carmel Forest fire.

Some areas, untouched by the fire, appear much the same as they had for decades: a dense mix of planted pine and various native shrubs and trees. Others had already been subject to intensive thinning, a strategy employed by JNF-KKL to create live fire breaks in the forest. Across the valley, the Carmel Forest Spa and Resort stands stark and exposed, having lost its protective layer of forest to the fire.

Crossing the Bustan stream, flowing after the recent rains, Michael Weinberger, Regional Forest Director of the Western Galilee and the Carmel Mountain Range, points out the fire demarcation line: "That's the exact point where we stopped the fire." One side of the line is a green tangle of older trees and plants; the other, nothing but exposed boulders and a low carpet of tentative new growth.

KKL-JNF - During and After the Fire

In 2010, Michael and his colleagues at JNF-KKL played a critical role in fighting the Carmel blaze. JNF-KKL's fleet of sturdy off-road fire trucks enabled the Israel Fire and Rescue Department to enter dozens of hard-to-access areas. Hundreds of JNF-KKL workers, familiar with the maze of trails and roads, helped firefighters navigate the maze.

Today, JNF-KKL is dedicating tremendous resources to the immense task of rehabilitating the Carmel forest, as well as to developing fire prevention strategies based on lessons learned in the 2010 blaze. David Brand, KKL-JNF's Head Forester, explains several aspects of the Carmel Rehabilitation Plan. "The budget nearly doubled to support the creation of live fire breaks near communities and sensitive areas in the forest, a process which requires intensive and repeated thinning of trees and shrubs. The maintenance of fire trucks and other equipment has also been given top priority. Several ongoing research projects are exploring new fire prevention techniques, while on the ground, KKL-JNF foresters are already implementing a variety of cutting-edge forest management programs."



2010

CARMEL FIRE LASTED 3 DAYS

1.5 MILLION TREES BURNED

200 JNF FORESTERS HELPED

JNF RAISED \$1.5 MILLION WORTH OF EQUIPMENT, PURCHASED 25 NEW TRUCKS AND \$7.5 MILLION TO REHABILITATE THE CARMEL

NEW TREES, VEGETATION & ANIMALS ARE POPULATING THE CARMEL LANDSCAPE TODAY

2015



IN THE CARMEL FOREST

A Gift from the Ashes

One of these projects lies just across the valley, where the road opens up onto a beautiful terraced hillside. As devastating as the fire was, stripping the forest bare appears to have had one advantage: it revealed huge areas of beautiful stone terraces that were lying hidden under the dense undergrowth and pine forest.

Terraces are an ancient agricultural technique found throughout Israel. Most of the terraced areas in the country were once used to cultivate grapevines, olives, figs, pomegranates, and other species without artificial irrigation. Here on the Carmel, JNF-KKL workers have painstakingly reconstructed several acres of fire-ravaged terraces, reinforcing the stone walls, and then allowing rows of weeds to grow along the edge of terrace to prevent erosion. They carefully selected a diverse range of trees to plant, including heirloom varieties of apricots, figs, and pomegranates. Some of the pines that survived the fire were also left standing, holding their place beside wild olives, pistachios, carobs, and other naturally fire-resistant indigenous trees.

The effect is a striking blend of old and new, wild and managed, conventional and organic.

“This is an instance of combining ancient and modern land management,” Weinberger says. “At this point, we have to use pesticides and water the trees artificially. We will eventually cut off the water and stop spraying altogether, letting the trees grow organically. For now, the vulnerable saplings have no chance of surviving the onslaught of vegetation that will take over if we don’t intervene.”

The terrace project achieves several objectives: increasing biological variation; preventing soil erosion; creating a fire break designed to prevent future blazes from spreading; and conserving an ancient agricultural heritage. The terraces will one day serve as an “edible” forest, providing a unique destination for hikers and bikers.

Balance and Integration

In addition to a focus on ecological regeneration, there are plans to transform this section of the forest into an accessible recreation area. The road will be paved with gravel and lined with mixed-level trees, simultaneously creating a shaded fire break, an escape route for tourists and residents, and an easy access road for fire and rescue vehicles.

Michael stresses that this is an integral part of JNF-KKL’s philosophy of forestry: “To meet the needs of future generations,

we must think broadly about how we plan and manage this forest, weaving together the preservation of historical sites, essential habitats, and plant communities, as well as the creation of safe and accessible areas for hiking, biking, education, and research. It’s all about balance and integration.”

Engaging all Possible Resources

One of the newest additions to the evolving Carmel forest ecosystem is a herd of goats placed as a means for reducing the risk of fires in targeted areas: Their grazing clears tangled vegetation, removes low branches, and facilitates movement through the forest. Some of the goats in the herd wear special GPS collars that tell JNF-KKL foresters where they are and how much vegetation they have cleared in that area.

The goats munch away on some lotem bushes, oblivious to the fact that they are part of JNF-KKL’s master plan to develop a safe and thriving forest environment for all on the slopes of the Carmel. ■

To donate or learn more about JNF’s work in Operation Carmel Renewal, visit jnf.org/Carmel.

