AED-2000L Being Used to Help Prevent Red Palm Weevil Infestation at the Palms de Elche in southern Spain, a UN World Heritage Site

The Palms de Elche is a unique site in southern Spain, where centuries ago the Moors established an elaborate date palm farming operation to supply seafaring explorers with a storable food commodity—dried dates. Today it is a UN World Heritage Site, preserved to display the unique farming system and aqueducts established by the North African culture that dominated Spain during the middle ages.

Dr. Michel Ferry is responsible for maintaining the health of the valuable palm orchards at the Palms de Elche. An increasing concern has been the introduction of the Red Palm Weevil (RPW) insect pest from Egypt and other Middle Eastern countries. RPW is the most significant threat to date palms throughout the Mediterranean and the Arabian Gulf region. Saudi Arabia even has a dedicated task force for dealing with control of the RPW threat. Dr. Ferry contacted us about the possibility of using the AED-2000L as an early detection tool for RPW.

In the Spring of 2004 our agent in the UK, Dr. Roger Hill of Kogan Communications, was invited by Dr. Ferry to visit and demonstrate the AED-2000L for detection of RPW larvae feeding in date palms. The demonstration work was done at Almunecar, a site of known RPW infestation on the Mediterranean coast. Dr. Hill worked with Dr. Ferry and his research associate, Ms. Susi Gomez, during the demonstration work. Part of the day was spent inspecting palm trees which had already been treated with an insecticide. There were no indications of RPW infestation in these trees. At the end of the day they noticed a small palm tree away from the others, which had not been treated previously for RPW. There was a notable difference in the number of sounds being produced in this tree. Dr Ferry investigated and found evidence of RPW larvae feeding in the crown of the tree.

Dr. Roger Hill (back) and Dr. Michel Ferry listen to one of the palm trees. The SP-1 sensor is magnetically attached to a nail that has been inserted into the soft palm wood. The nail acts as a "waveguide" to conduct the sounds to the SP-1 sensor from RPW larvae feeding on the wood.

Click on the icon below to hear the type of sounds created by RPW larvae feeding on the infected palm tree.

Dr. Ferry removes bark from the RPW-infected tree at the crown and reveals an RPW larva feeding just below the surface. Several larvae were discovered.

Closeup view of the RPW larva feeding in the palm wood. RPW Larvae can be 1"-2" long.
(Photos courtesy of Susi Gomez)

In April 2004 AEC provided Dr. Ferry and Ms. Gomez with an AED-2000L Insect Pest Detection Kit for further research on detection of RPW infestations. Dr Ferry has voiced strong optimism based on this initial demonstration that the AED will become a significant tool in the fight to control RPW in the Mediterranean region . Early detection is the key to effective treatment, minimizing insecticide use, and to limiting the importation of infected tree stock from other countries.