



The beaches encircling the Mediterranean island of Cyprus provide a perfect setting for a sketch in the sand. But any marks I etch with a stick are resolutely obliterated by the sea, which seems to favor only rippled designs. It is easy to become mesmerized as the rhythmic movements and sounds of the lapping water lull me into a trance-like state. Instead of empty waves I envision waves bearing ancient wooden ships full of people on their way to settle this small island some eight or so millennia ago. My shoreline design takes on the appearance of changing patterns of plants that have cloaked the landscape through time. As the vulnerable sketch is slowly erased by the waves, one ponders if there might be certain parallels between the relentless wave action and any role humans played in the vegetation history of the island.

While sorting charred plant parts recovered from the A.D. 100-365 Roman Age site of Kourion (Curium), I began to ponder the patterns of flora on Cyprus. On excursions to collect modern plants in the lowland island setting where this ancient city is perched overlooking the sea, always in the back of my mind was the question, "Is the current vegetation similar to that which was available to the Romans?" Knowing that Kourion and other prehistoric ruins on Cyprus have preserved only limited clues to ancient floral choices, it seemed important to explore the history of the island to shed light on the matter.

There may be few of the present-day vegetation patterns that an ancient settler would recognize. Although natural forces such as changing moisture and temperature regimes have had a lot to do with this, the forces applied, consciously and unconsciously, by humans have been of no less impact. For millennia people have cut down the trees of Cyprus to fuel the smelters and build the ships that transported copper and other important trade goods to large and small Mediterranean centers of commerce. Today only 17% of the island is classified as woodland, yet in the 3rd century B.C. a writer described the island as completely forested. People have also cleared extensive sections of land for grapes; today a trip into the Troodos Mountains reveals completely terraced slopes bearing vineyards for as far as the eye can see. Domestic sheep, goats, cows and pigs have grazed the land for much of the period that people themselves have been on the island. And all the while new plants from foreign lands were brought to Cyprus, starting very early with crops such as barley (*Hordeum*) and wheat (*Triticum*), and continuing through the ages, until today many villagers seem to have no clear sense of the island's native floral identity.

Although in many parts of the world vegetation history is inferred from pollen that is recovered from continuously wet places such as bogs or lakes, Cyprus offers few such likely situations where one might look for a long-term pollen record. In lieu of this we can offer informed speculation on what plants were probably available to the ancient Kourion folk. R. D. Meikle, the scholar who wrote the two volume *Flora of Cyprus*, has given much thought to the island's floral history and to the nature of a lowland climax

vegetation. His ideas derive from visits to relict areas that provide hints of natural lowland vegetation patterns. Where today the only trees that one sees when standing on the Kourion ruins are domestic olive (*Olea*) and carob (*Ceratonia*), it seems likely that once a thin forest of pine trees (*Pinus brutia*) and smaller trees or shrubs of juniper (*Juniperus phoenicea*) and oak (*Quercus coccifera*) would have been within view. Where now a limited number of widely-spaced small shrubs armed with spines and stickers predominate, a diversity of tall and short shrubs including various species of showy-flowered *Cistus* and fragrant members of the mint family (Labiatae) probably prevailed. What perennial and annual taxa were common is anybody's guess; currently one finds an abundance of thistles (*Echinops*, *Centaurea*) and a species of asphodel (*Asphodelus*) scrupulously avoided by grazing sheep and goats. The list of trees and shrubs that could be expected in mesic habitats is long; the edges of the nearby dry Kouris riverbed today harbors only low shrubs and barren ground. The likely conclusion one comes to is that humans and nature together have fostered vegetation changes on Cyprus that will be difficult to reconstruct over the long run. The local vegetation viewed 15-18 centuries ago by the Romans at Kourion could well have been different indeed.

Even as we formulate hypotheses on the nature of past vegetation the business of carefully confirming the identity of the modern floral collections must go on. So, eventually my large box of modern Kourion area plants had to be maneuvered among the crowds on the London subway, and then lugged some distance to Kew Herbarium so that species identifications could be verified in a repository well represented by Mediterranean specimens. On this journey it occurred to me that most people would take what I was carrying at face value—a box of dried and flattened plants. But I considered this bulky box to be a historical document that in part chronicled human activities. I carried domestic olive and carob sandwiched among a host of thorny and prickly resistors to grazing. Packed inside was a piece of joint-pine (*Ephedra*) that a local goat had hungrily sought from me after I extricated the specimen from deep within a tangle of barbed wire. What was missing from my box were the pines, junipers and oaks that once might have provided a tall upper story appearance to the landscape, and the diversity of mesophytic species that may no longer be in the region. Who knows what other taxa were missing. We are hopeful that with time the site of Kourion will relinquish a number of secrets regarding those plants present in the area during Roman times.

For one whose primary professional activities have been centered in the American Southwest, where the nature of human impact on vegetation seems mild by comparison, working with an ancient plant record in a long-occupied area of the Old World was an eye-opening experience. But while I have emphasized contrasts through time, I was reminded by excavation director David Soren that as things change, so do they remain the same. One perceives continuity between the ancient veneration of trees planted and tended in a sacred grove at the Iron Age Sanctuary of Apollo near Kourion, and a huge living tree in the nearby town of Paphos that today has hundreds of small rags tied to its branches by people with special requests. These modern shreds of cloth subtly reveal how certain cultural points of view may be retained and rewoven to fit a (partly self-induced) changing natural resource base.

The hints offered from archaeological sites about ancient floral choices on Cyprus offer a foundation for understanding the island's vegetation history. Observation of modern relict areas of plants provides insight helpful in speculating on the effects of thousands of years of domestic grazing, cultivation, and tree-cutting. Together they suggest that the vegetation available to the Romans at Kourion represents a state somewhere along a long continuum of change, perhaps not much more stable than my modern designed sketched into the shortline sand, persisting only briefly before the sea reclaims it.

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