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VIEW #2

THE PALM IN THE RIFT

Matanya Sack and Ye'ela Gundar

The Valley

The area between the tributaries of the Sea of Galilee and the Red Sea, referred to locally as “the Valley,” is only a fraction of “the Rift.” To address the Rift Valley as a whole, we must zoom out of the Jordan Valley to include the entire region stretching from Turkey to Mozambique. To form a planning agenda for “the Valley,” we must first map its main spatial characteristics. Certainly, one of its most critical characteristics or common perceptions is its doubling as a geopolitical border.

The valley was first conceived as a political boundary during the Ottoman period, in 1906, when it was announced as the “administrative separation line.” This separation established Transjordan to the east of the Arava Valley (Arabah in Arabic, literally “desolate and dry area” in both languages) and Palestine to the west. Following the 1948 war this line became the armistice line between Jordan and Israel—not including the West Bank. On October 26, 1994 the Israel–Jordan peace treaty was signed south of the Dead Sea basin in the Arava Valley.<sup>1</sup> The border along the valley is partially formal and agreed upon (between Israel and Jordan) and partially contested (between Israel and Palestine). In the peace treaty, Israel and Jordan agreed that “where the border passes in the stream of a river, in case there are natural changes in the route of water flow... the border will move to the new route.”<sup>2</sup> So landscape takes precedence—the political border becomes an outcome of geographical data.

Following the agreement, the border was marked in the Arava for the first time, with border stones, as a joint effort between the two states. In the Jordan and Beit She'an Valleys there is not yet a marked border, which should be agreed upon with Palestine. At present, there are no official programs for cooperation along the

<sup>1</sup> Hila Sagie, Yodan Rofé, Avigail Morris, Daniel E. Orenstein, and Elli Groner, “Cross-Cultural Perceptions of Ecosystem Services: A Social Inquiry on Both Sides of the Israeli-Jordanian Border of the Southern Arava Valley Desert,” *Journal of Arid Environments*, vol. 97 (October 2013), 38–48. DOI 10.1016/j.jaridenv.2013.05.007.

<sup>2</sup> Treaty of Peace Between the State of Israel and the Hashemite Kingdom of Jordan, 26 October 1994, Israel Ministry of Foreign Affairs website: <http://www.mfa.gov.il/mfa/foreignpolicy/peace/guide/pages/israel-jordan%20peace%20treaty.aspx>.

valley. There are many examples illustrating this: two airports of different nations one next to the other, two nature reserves of the same area which are separated; doubling of infrastructures, waste of resources, division instead of inclusion.

### From Valley to Rift

We suggest that while the historical process may have structured the valley as a divider—a border—between multiple entities, we should remember that as a geological and ecological unit it is a single, connected entity. Political borders often mask more natural boundaries marked in the landscape. We suggest looking at the valley as part of a larger geological system spreading over 6,000 kilometers and made up of multiple tectonic plates pulling apart: The Great Rift Valley. North to south, it stretches from southern Turkey through Syria and the Beqaa Valley in Lebanon, along the Jordan River, the Dead Sea, the Arava and the Gulf of Eilat, the Red Sea, and the Afar Triple Junction to Kenya, where it eventually splits up and continues all the way to Zimbabwe and Mozambique.

The Great Rift Valley is a topographical marker; its landscape expands across countries and societies, ecosystems and cultures. It was formed some thirty million years ago as the result of shifting tectonic plates. Ever since its formation, this rift has been a space of perpetual motion. However, not only continents move—so do birds, certain plant species, languages, as well as trade convoys and human migrants. We wish to emphasize how this abundant migration may also serve as a fertile ground for cooperation: an exchange of knowledge, materials, seeds, and much more.

Borders also move, especially along this rift, which was historically used as a corridor for the migration of entire civilizations. We can look at it from the perspective of the states and nations along it. Such a reading, based on political borders, delineated the Israeli perspective as is apparent in the Hebrew language, which refers to the Great Rift Valley as “The Syrian-African Break.” We prefer to use “The Great Rift Valley”—or simply “the Rift”—to place emphasis on the region’s physical geography.

## The Notion of Territorial Agriculture

Agriculture defines and characterizes both sides of the Israel–Jordan border along its entire length. It is a matter of territorial agriculture, one relating clearly to aspects of regional settlement, political issues, and the ecosystem comprised by all of them. Historically, agriculture was used as a tool for reinforcing political borders.<sup>3</sup> The Jewish Agency wished to establish villages along the border. The aim was to deepen the border from within, having agricultural fields serve as another layer of separation, a buffer along the border. In the Arava, the edge of the palm groves marks the beginning of the border.

All along the Jewish side of the Jordan Rift Valley there are modern agrarian settlements. They have been established since the beginning of Zionism (mainly in the north), throughout the first decades of the nation state, and even up to the 1970s and '80s. In Beit She'an, at the northern end of the valley, one can clearly see the difference between the fragmented and varied Jordanian agricultural plots on one side and Israel's monoculture on the other. In contrast, further to the south in the Arava, there are some similarities in crop types and agricultural techniques, as well as a certain level of cooperation; even the grove and field proportions are similar.

We believe that just as agriculture may be employed as a tool for fortifying borders and distinguishing differences, so can it function as a bridge between neighboring cultures—a platform for common interests. The history of the rift already encompasses this possibility, and we would like to suggest it not only as a nostalgic memory but as a living and vibrant possibility for future scenarios.

To this we may add that agriculture requires a certain zoom-in, determines a certain scale as it is a type of land use. It is about textures, size, and most importantly, it is about human settlement. Hence it is a relevant trajectory through which to connect between the reading of “the Rift” as a whole and “the Valley” in particular.

<sup>3</sup> Matanya Sack, “Agriculture as Settlement–Territorial Agriculture in Israel,” in *ISRAEL Lessons*, Laboratory Basel (laba), EPFL, eds. Harry Gugger,

Barbara Costa, Salomé Gutscher, Stefan Hörner, and Charlotte Truwant (Zürich: Park Books, 2017), 18–25.

## Towards Date Palm Cultures

The valley's main landscape feature is the date palm plantation. Its tight grid, like an architectural forest of columns, frames views to the horizon of the mountains on both sides of the valley. A date palm grove provides shade and microclimate, and, of course, green, orthogonal swatches for the eye to rest in the wild desert expanse. The date palm, *Phoenix dactylifera* (or *Tamar* in Hebrew) is also the main crop within the Great Rift. Its family includes 104 types and about 444 species, some tropical and a few that grow in the desert. Of all crops cultivated in the valley, the date palm is the most common and the most important. In addition to the value of dates as a highly nutritious food source, they have also been documented for their medicinal purposes.<sup>4</sup> The crop thus also holds the highest potential for the future of the region. Gaining popularity around the world, it is the crop that provides the valley with the highest competitive advantages based on the area's unique geography and climate.

The rift is packed with cultural references to the palm and its fruit: rituals, holidays, historical texts, mosaics, maps, and even the names of people and places pick up on its imagery or language. It provides a common icon, found on coins and in the decorative capitals of classical columns, and a construction material itself—all along the rift's thousands of kilometers. Many coins from various empires along both sides of the rift from north to south bore the symbol of the palm. Today it is still featured on the Israeli ten-shekel coin.

The palm is a symbol of abundance and plenitude in the heart of the desert, a symbol of nobility, and of withstanding hardships. More significantly, the Madaba Map, dated between the sixth and seventh century AD and presenting the Byzantine Empire's boundaries from Thebes, Egypt to Sidon, Lebanon, is decorated with palms along the Jordan Valley. This palm-decorated map is an expression of the relationship between geography and culture: it elevates the palm as the major symbol of the region.

<sup>4</sup> Abdelouahhab Zaid and Pieter Francois de Wet, "Origin, Geographical Distribution and Nutritional Values of Date Palm," in *Date Palm Cultivation*, rev. 1, Plant Production and Protection

Paper 156, Food and Agriculture Organization of the United Nations, ed. Abdelouahhab Zaid (Rome: FAO 2002).

The palm is also mentioned in the Bible as the signifier of a specific place, as in “Jericho, the city of palm trees” (Deut. 34.3, NIV). However, the palm is more than a marker of the landscape; it is a metaphor for health and vigor—“The righteous will flourish like a palm tree” (Ps. 92.12, NIV)—and an ancient religious motif, appearing in the imagery of all religions along the rift. The date is considered one of the seven holy fruits in Judaism. It became a Jewish symbol of grace and elegance—the name Tamar is currently the most popular girl’s name in Israel. In Christianity, the date palm represents immortality; eternal life promised to martyrs who died for the sanctity of the Christian faith; the paradise awaiting them. “Orientalist” painters traveling from classical Europe to the Middle East often referred to the date palm. They considered the tree an exotic phenomenon, something they only knew and imagined from Biblical stories.

The palm is frequently mentioned in the Quran at Sura 17. The Prophet’s mosque, built at Medina around 630 AD, was constructed using date palms: the columns and beams of the trunks, and the thatching and prayer mats of the leaves. According to one tradition, it was at Medina that the palm was first planted and cultivated.<sup>5</sup> In Arabic, the date palm and the palm grove are called Nakhl, which is also the root of the Hebrew terms for “land estate” and “legacy of forefathers in the land.” It is interesting to look at the date palm in its broad scope of appearances and meanings, as a possible foundation for a future vision, where the rift is more of a shared territory. Having a central role in the cultures of the rift civilizations, we propose a new regional agenda based on the notion of date palm cultures.

### Methuselah

The date palms disappeared slowly during the Middle Ages, mostly due to the Mamluk occupation, accompanied by the destruction of natural habitats and the degeneration of agriculture.

<sup>5</sup> Zaid and de Wet, “Origin, Geographical Distribution and Nutritional Values of Date Palm.”

The priest and nature researcher Henry Baker Tristram, traveling in Israel at the beginning of the nineteenth century, indicates after visiting Jericho, that “the last of the date palms is missing, and no more crowns of date palm leaves are flowering above the plain.”<sup>6</sup> Other travel writers to the Holy Land, such as Mark Twain, were also surprised to find the valley empty of the date palm representation.<sup>7</sup>

In the beginning of the twentieth century there were only twenty-five hectares of cultivated date palm left.<sup>8</sup> With the renewal of Jewish settlement in Israel, the idea was raised to bring back the date palm. The idea took shape in the Second Immigration within the Kinneret Group (the prototype for communal farms and villages in Israel—the Kibbutz) on the Sea of Galilee.

Most countries forbade the export of date palm saplings and kept them as a national treasure. But in varied ways, saplings of different origins were brought to Israel. A few of these succeeded and cultivation began in the villages of the Jordan Valley, Beit She'an, and the Arava. After the foundation of Israel more varieties were brought to the region. The most famous cultivars amongst the 60,000 scions imported for grafting were the Hadrawi and Halwi from Iraq, the popular Nur from Algeria, and the Medjool from Morocco. Later, varieties were introduced from California.<sup>9</sup> Palms began to re-emerge in the area.

Zionism adopted the palm as a symbol of “virgin land,” the restoration of a former glory, and the return to Zion. Many palms were planted either along the access roads to key Zionist settlement sites, such as Mikveh Israel Agricultural School, or in moshavot, Israeli’s first agricultural settlements based on private ownership.

With the global demand for dates on the rise, the date palm continues to play an important role in the region’s economy. In the last decade, there was a large increase in the date palm industry in

<sup>6</sup> Henry Baker Tristram, “The Survey of Western Palestine: The Flora and Fauna of Palestine” (ReInk Books, 2017; originally published by The Palestine Exploration Fund, London, 1885).

<sup>7</sup> Mark Twain, *The Innocents Abroad* (Hartford, CT: American Publishing Company, 1869).

<sup>8</sup> Gilad Haskin, “Bringing the Palm Trees to the Land of Israel by the Zionist Movement,” independent research project, 5/2/2014, accessed April 24, 2018: <https://www.gilihaskin.com>.

<sup>9</sup> Haskin, “Bringing the Palm Trees to the Land of Israel by the Zionist Movement.”

Israel—from 24,000 tons produced in 2009 to 41,000 tons in 2015, the Medjool variety constituting 74% of the production.<sup>10</sup> The rise in date palm plantations follows not only growing demands for the sweet and healthy fruit but is also affected by the global agricultural economy of other crops, such as the export crisis of peppers from Israel to Russia and Europe, and due to changes in subsidy regulations from the Israeli Ministry of Agriculture and Rural Development.

Nowadays, Israel's share in the EU date market is lower than ten percent in weight, but its economic value is much higher since most of the export is of the Medjool cultivar, which at recent trends is considered the highest quality and thus also the most profitable. The industry's annual revenue is around 190 million shekels (around fifty million US dollars). In the Palestinian Authority, agriculture is one of the main economic branches, providing income for thousands of families. The export of dates from the Palestinian Authority to the Emirates, Qatar, Saudi Arabia, Turkey, the United States, Russia, and Europe is done by Palestinian companies. And on the other side of the valley, the date palm is also the main agricultural crop: Jordan produces 10,000 tons of dates a year, of which half is exported to Europe, Turkey, Canada, and Japan. The country expects to increase this output fourfold in the next few years.

In recent decades, agricultural practices changed considerably, and the use of advanced technologies has become more widespread. Several new projects for the export of date palms were also advanced. Currently, however, the main inhibitor to the industry's continued growth is the limit on water resources. For this reason, the Jordanian government raised the water allocation for date palm irrigation in April 2016, in order to expand the plantation area and strengthen Jordan's competitiveness in the local and global date markets.<sup>11</sup>

While the palm industry continues to grow in the Arava, a unique palm tree grows on the other side of the valley in Kibbutz

<sup>10</sup> Daniel Hausler, "The Date Sector," Research, Economy and Strategy Division, Israel Ministry of Agriculture and Rural Development, 2017.

<sup>11</sup> Hausler, "The Date Sector."

Ketura, which might one day establish the oldest palm grove in the world: "Methuselah," a young date palm sprouted by Dr. Elaine Solowey in 2005 from a 2,000-year-old seed found during the excavations of Masada in the mid-1960s. The palm was nicknamed "Methuselah" after the longest-living person listed in the Bible; Methuselah the palm represents the oldest known tree seed to have been successfully germinated. As such, this male palm is a living relative of the Judean date palm, a tree that was once a major food source and crop for export in the ancient Kingdom of Judah and which had been extinct for over 800 years. There are plans to breed Methuselah with its closest extant relative, the Hayani date from Egypt, in the hopes of producing fruit by 2022. This project is part of a desert plantation dedicated to the domestication of wild trees for food and fodder.

The story of Methuselah raises awareness for the importance of creating a genetic bank for dates within the rift. As described, the palm's economical value to the arid and isolated region is immense, and the reappearance of the oldest palm is a reminder of how diversity is at risk in the economical race. For this reason, Methuselah has become an important international landmark in the Arava and the Great Rift alongside the agricultural trend of monoculture.

### The Beetle

Agriculture is, of course, a human-made environment. No matter how large its scale, the geography of the Great Rift Valley will always be larger. The natural environment, while obviously affected by humans to a certain degree, sometimes ignores human-made boundaries. One such transgression is that of the red palm weevil, *Rhynchophorus ferrugineus*—the most harmful pest to the palm family. Its larvae eat the trunk of the palm so thoroughly that in most cases the pest ends up killing the tree. The main challenge is identifying the infection in its early stages.

Originally introduced from Asia in the 1980s, it can now be found all around the Mediterranean, Europe, and Africa. The first weevils arrived from the Far East on exotic palms brought to the Persian Gulf. From there they were introduced to Egypt some fifty

years ago, where the palms suffered quickly and severely. Unfortunately, the Egyptians then apparently sold infected trees to countries all around the Mediterranean—Jordan, Greece, Italy, France, Spain, Turkey, Syria, and Lebanon.<sup>12</sup> The weevil arrived in Israel, to the groves of the northern Dead Sea, by the end of the 1990s.

In recent years the weevil's reach has expanded considerably, both in the Mediterranean Basin and along the rift, drastically endangering the supply of date palm as a regional food source, the foundation of a reliable economy for entire nations (such as Algeria), and as an integral part of the iconic palm grove landscape. We have become so accustomed to human-made and -controlled environments—exemplified by agriculture, cities, and to a great extent even nature reserves—that to the non-professional, the idea of such a crisis seems entirely unlikely, even dumbfounding. But this is what farmers deal with every day. It is only the scale that is different, and that it slowly spread and eventually appeared in urban gardens as well.

The story of the palm weevil is a lesson in human–nature relations, of global agriculture and markets, and of potential solidarity across the Great Rift. This environmental threat, while human-induced, acts as a warning symbol for other environmental issues along the rift, which are, to some extent, always affected by humans: the pollution of the Jordan River, the loss of biodiversity in the region, the coral reef crisis in the Red Sea, and the 2015 oil leak due to an infrastructure failure in the Israeli pipeline between Eilat and the Mediterranean. Cooperation is absolutely necessary for ending the weevil infestation.

### Rift Community

As the environment knows no political boundaries, all concerns must be addressed through cross-border cooperation. Toward this end, we propose a new regional, cross-continental community as

<sup>12</sup> Shimon Biton, “Recommendations for the Treatment of Planted Palm Trees Against the Spread of the Red Palm Weevil,” Israel Ministry

of Agriculture and Rural Development, 2014 [in Hebrew].

the stage for a new type of cooperation—with the palm as its central symbol. The notion of reintroducing the palm as the symbol of the rift and as a central economic source, bridges the scale of a plant and the scale of a continent, transgressing and overcoming political separations. By providing a new dimension of identity and belonging that reaches beyond nations and states, we may build the foundations necessary for further exploration, research, and knowledge transfer between genetic banks and the dissemination of breeding techniques.

As an example, for future rift community scenarios, we may look at the cross-border cooperation already under way:

On the Israeli side lies the Hevel Eilot Regional Council, an area of 2.4 million dunams (accounting for about ten percent of the Israeli territory), with a small population of approximately 4,000 residents divided amongst twelve localities, of which ten are kibbutzim. The kibbutzim of the Arava were established between the end of the 1950s and the 1980s. All settlements have agricultural land, most of which is used for date plantations which are irrigated by a mixture of treated wastewater from Eilat city and local drilling waters, which are saline.

On the Jordanian side of the Arava, which encompasses 2.4 percent of Jordan's area, it is very similar. The district includes eight localities with a total population of some 7,000 inhabitants. Al-Karikara is the largest village with 2,200 inhabitants followed by Al-Rishe, Rahma, Bir Madhkur, New Feinan, Abu Hashiba, Al-Qatar, and Old Feinan. The populations of Bir Madhkur, Abu Hashiba, and Old Feinan are nomadic and live either in temporary housing or caves. In 1946, about 3,400 people lived in Wadi Araba, including the Gulf of Aqaba, most of them nomads. The rest of the population cultivated a few date orchards in the Aqaba area.<sup>13</sup>

To a certain extent, cross-border cooperation started just after the 1994 peace agreement between Israel and Jordan. An interesting case study is the agricultural project between Kibbutz Yotvata (Israel) and Rahma (Jordan), which is based on solidarity and a

<sup>13</sup> Hila Sagie et al., "Cross-Cultural Perceptions of Ecosystem Services: A Social Inquiry on Both

Sides of the Israeli-Jordanian Border of the Southern Arava Valley Desert," 38–48.

yearning for establishing neighborly relations within the Arava Valley, referred to as the “Peace Valley” by King Abdullah of Jordan and Shimon Peres in Israel.<sup>14</sup> While the border between Israel and Jordan consisted of a 500-kilometer uncrossable zone stretching from the Wadi Araba Crossing at Eilat/Aqaba to the Jordan River Crossing at Beit She’an/Irbid, in 2006 a gate was erected near Kibbutz Yotvata, forty-five kilometers north of Eilat. Here crossing was made possible for farmers on both sides of the border who took part in the cross-border agricultural project. This initiative aimed to introduce modern and efficient agricultural production technologies to the Jordanian part of the valley in order to raise the living standards and provide employment opportunities to the Bedouins in this region. The project, which provided advice and often direct consultation visits, was followed by the successful cultivation of date palms and other agricultural crops.<sup>15</sup>

The cooperation has shown how vast amounts of knowledge can be produced by placing the Israeli Yotvata and Jordanian Rahma into a single frame of observation. It also demonstrates the power of communities and the potential to exchange important knowledge and precious seeds unbounded by politics or religion. And while the rift has been recultivated with the iconic palm, it is important to emphasize the community’s responsibility to be good stewards of the land.

To conclude, we began with framing the discussion on the valley within the larger perspective of the rift, with “territorial agriculture” as its focus and, more specifically, the date palm as the material and symbolic heart of this vision for a new cross-continental “rift community.” The vision requires cultural cooperation, joint data collection, and the mutual development of a regional knowledge base. Toward this end, further research is needed into regional agricultural practices, construction techniques, community structures, economic systems, tourism, ecology, and so on. After all,

<sup>14</sup> Nadav Feuer, “Technology Transfer and Sustainable Development: Implications for Local Culture, Rachme Village, Aqaba Province, Jordan,” 31/01/2006, TS, independent research project, Arava Institute for Environmental Studies.

<sup>15</sup> Feuer, “Technology Transfer and Sustainable Development: Implications for Local Culture, Rachme Village, Aqaba Province, Jordan.”

not only humans, animals, and plants are migrating across this expanse; knowledge also travels a great distance. The story of Yotvata and Rahma demonstrates how solidarity in the rift can change existing political power relations, and when supported by the notion of territorial agriculture—based on the idea of the palm in the rift—raise and empower a new cooperative movement with a unique spatial vision: the rift community.