

Iraq as a Source of Date Varieties for the USA and the American Scientists Who Collected Them

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Introduction

The United States date industry was established formally during the first three decades of the nineteenth century through the importation of offshoots from the Middle East and North Africa by the U.S. Department of Agriculture. More than 140 promising named varieties were brought in as offshoots from Algeria, Egypt, Iraq, Morocco, Oman, Pakistan, Saudi Arabia, Sudan and Tunisia (Nixon 1950). The objective of importing so many varieties was to find the most adaptable date palms for climatic and soil conditions found in the most promising areas of California and Arizona (Swingle 1901).

Field trials of the imported dates quickly showed that only a relatively small number could be commercially grown and produce high-quality ripe fruit. A recent study of the US date industry (Hodel and Johnson 2007) found that there are at present only four major commercial varieties: Barhee, Deglet Noor, Medjool and Zahidi. An additional dozen varieties are of minor commercial value: Amir Hajj, Dayri, Halaway, Hayany, Iteema, Khadrawy, Khisab, Maktoom, Samany, Sayer, Thoory and Zagloul. These 16 date varieties originate from four countries: Iraq (9), Algeria and Egypt (3 each) and Morocco (1). An additional 16 of the original 140 varieties introduced survive in living germplasm collections in California and Arizona; the remaining some 108 varieties have been lost (Hodel and Johnson 2007).

The objective of this article is to provide information about the nine date varieties originating from Iraq, a chronology of the collections and the American scientists who conducted the expeditions.

Collecting Expeditions

Three collecting trips to obtain offshoots from Iraq took place in 1902, 1913 and 1929, led by David G. Fairchild, Paul B. Popenoe and Roy W. Nixon, respectively.

Expedition of 1902

The American botanist and legendary plant explorer David Fairchild (1889-1954) was responsible for the introduction of thousands of exotic plants to the United States through his work with the U.S. Department of Agriculture. The author of a number of popular books on plant exploration, he also established a celebrated tropical garden in Miami,

Florida, which bears his name (Fig. 1). It was during Fairchild's employment as a plant explorer for the U.S. Department of Agriculture that he made an important date-palm collecting expedition to the Persian Gulf in 1902 (Fairchild 1903). Visiting southern and northern Iraq, Fairchild procured offshoots in Basrah and Baghdad of Halawy, Khadrawy, Maktoom, Sayer and Zahidi. An unspecified number of offshoots of these varieties, and others, successfully reached the USA in 1902.

According to Nixon (1950) Halawy is the second most common variety grown in southern Iraq, and the best variety of fruit exported to Europe and the USA. Khadrawy represents another common date variety of the Basrah region (Dowson 1923). Both are soft date varieties. A third soft variety from southern Iraq, Sayer, is said to be the most common in that area (Dowson 1923). Sayer variety date palms do not produce exceptional fruit, but have the advantage of being able to tolerate marginal soils which are dry and salty (Nixon 1950). Fairchild obtained offshoots of Maktoom and Zahidi varieties in northern Iraq. Maktoom is esteemed as one of the best soft dates in the Baghdad area. The most widely grown variety in Iraq is the semidry Zahidi; it is most common in the northern part of the country (Nixon 1950). According to local tradition, in the long history of date-palm domestication, Zahidi was the first named female date variety (Dowson 1923). In California, in addition to producing excellent fruit, Zahidi is considered the most desirable variety for ornamental use because of its compact crown of erect leaves.

Expedition of 1913

As a young man, Paul B. Popenoe (1888-1979) served as an agricultural explorer for his father, F.O. Popenoe, founder of West India Gardens, Altadena, California. Paul Popenoe (Fig. 2) collected approximately 15,000 date palm offshoots during an expedition to Iraq (Basrah and Baghdad) in 1913 (Popenoe 1973). The collection intentionally supplemented all of the varieties collected by Fairchild, and included the first offshoots of Barhee (soft) and Daryi (semidry) varieties, both commonly grown in southern Iraq (Nixon 1950).

Barhee is a remarkable date because it can be eaten at khalal, rutab and tamar stages; it has become, in khalal stage, an important specialty date in California and other countries. Dayri is a very hardy variety, able to produce under adverse soil and climatic conditions but its fruit quality is not exceptional (Nixon 1934).

Paul Popenoe spent only a few years devoted to date palm, yet he wrote two important books: *Date Growing in the Old and New Worlds*, 1913, and *The Date Palm*, completed in 1924 but not published until 1973. Moving on from an interest in dates, in later life he became a student of heredity, an advocate of marriage counseling and popular speaker and writer.

Expedition of 1928-1929

At the height of his career, Roy W. Nixon (1895-1976), was the world authority on dates. He spent more than 50 years researching dates for the US Department of Agriculture and authored 79 technical publications on the date palm. (Fig 3.) In 1928–1929 Nixon spent six months on a study tour of date culture in Iraq and Iran. In Iraq, Nixon obtained offshoots of two new varieties for the USA: Amir Hajj, a soft date from the Mandali oasis northeast of Baghdad and Khisab, another soft date, from the Basrah area. Interest in these varieties derives from the fact that Amir Hajj does well on sandy soils, and Khisab because it is a very late season date. The offshoots reached the USA in 1929. Nixon (1930) published a brief account of Iraqi date growing from his trip. During his time in Iraq, Nixon also made an 18-minute motion picture of date palm practices. A black-and-white film without soundshows various aspects of date culture, packing and shipping in Basrah, Baghdad and Mandali Oasis; explanatory text is inserted between the film segments. A digitized version of the film can be viewed online, see Nixon (1929).

Conclusion

Iraq played a key role in providing offshoots for the establishment of the small but successful USA date industry. David Fairchild, Paul Popenoe and Roy Nixon traveled to Iraq to select and supervise export offshoot consignments. The USA derived considerable benefit from the receipt of the varieties from Iraq and the other countries. In return, date-growing countries have benefitted from the scientific research contributions on the palm by American scientists.

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Figure 1. David G. Fairchild (1869-1954) Undated photo, courtesy of Hunt Institute for Botanical Documentation.



Figure 2. Paul B. Popenoe (1888-1979). Photo 1915, courtesy of Wikimedia Commons.



Figure 3. Roy W. Nixon (1895-1976). Undated photo courtesy of Stewart Nixon.