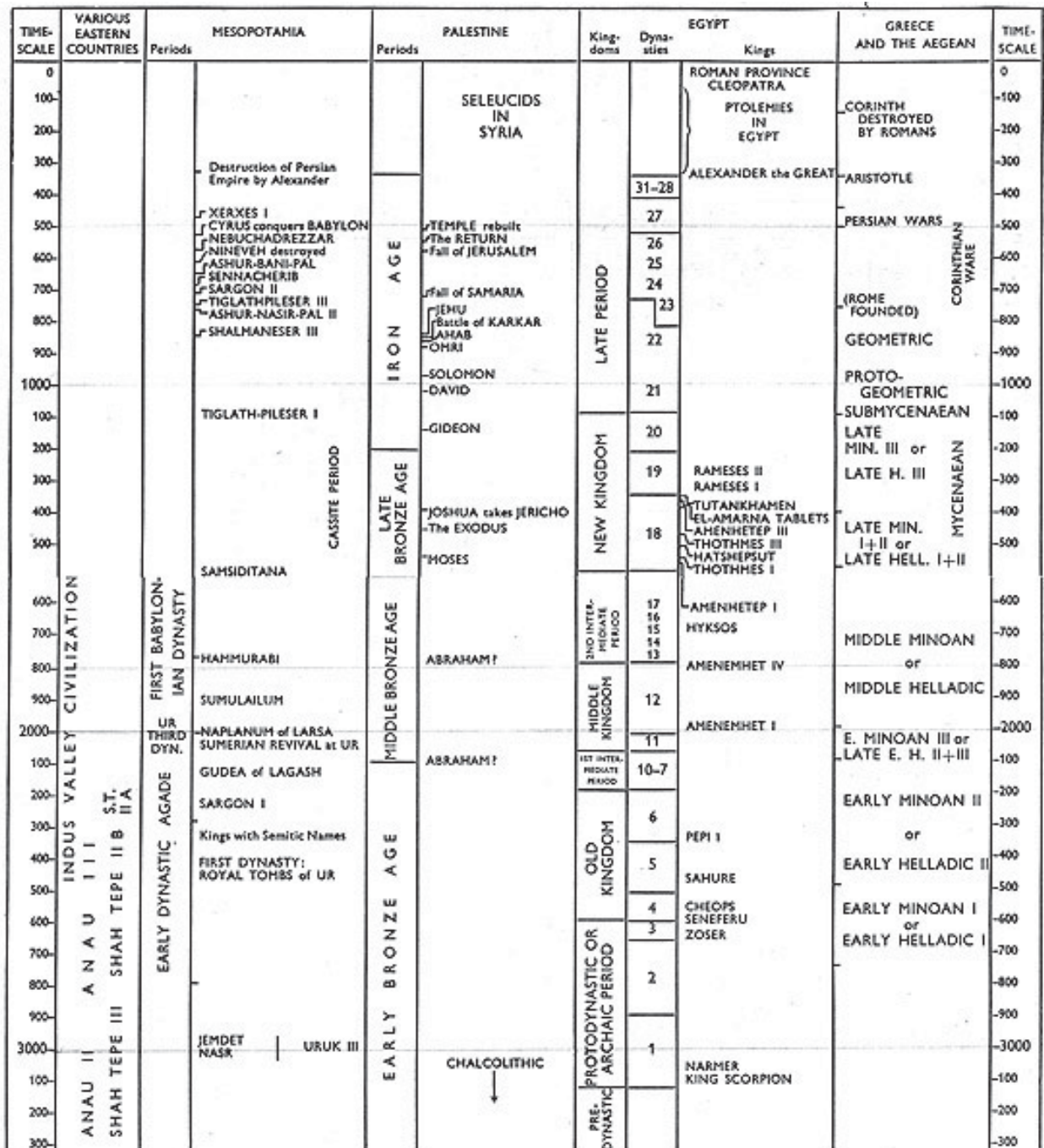


# Lecture 9

## Ancient Near East Cultures: Sumeria, Babylonia, Judea

The ancient Near East cultures, known as **Mesopotamian civilization** are largely based on Semitic populations that existed between the Tigris and Euphrates rivers, now present day Iraq. See Fig. 9-1 for a chronology of Mesopotamian as compared to Egypt, Palestine, and Aegean civilization from 5000 years

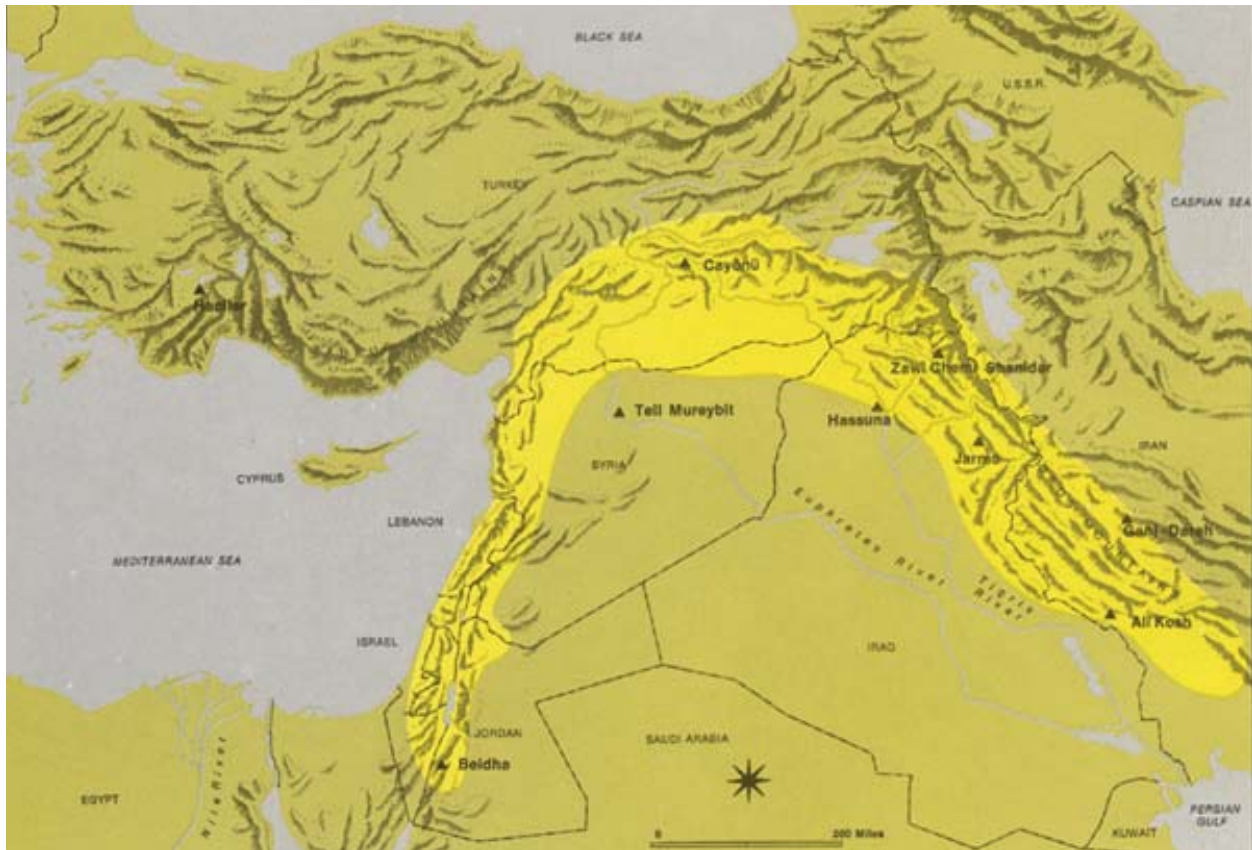


**Fig. 9-1.** Chronology of Mesopotamian civilization from 3000 BCE to the current era (birth of Christ) in comparison to Palestine, Egypt, and Greece. Source: Singer et al. 1954.

ago to the beginning of the current era (birth of Christ). This area was the home of the first city-states, a monarchical type of government, and continual warfare and conflict that continue to this day. The climate is winter wet and summer dry, particularly suitable for livestock rearing and large scale cereal cultivation. It is the source of wild wheat and barley as well as sheep and goats. The area includes the Fertile Crescent (Fig. 9-2)—present day Israel, Jordan, Lebanon, Syria, Iraq, and Iran as well as all of Asia southwest of Russia and the Black Sea and west of India and Afghanistan. The agricultural history of Mesopotamia can be inferred from many sources including cuneiform tablets and inscriptions, as well as archeological remains. Horticulture and agriculture of the region is richly annotated in later biblical sources. Plant domesticated included the carob, olive, jujube, and almond, and pomegranate. From the south (Egypt) came the date; from the southeast (India) came the fig, pomegranate, and citron; from the north to northeast came the grapevine, apple, pear, peach, pistachio, plum, mulberry, quince, and walnut.

### Sumeria (3500–2000 BCE)

Sumeria was an advanced culture born in the 4th millennium BCE (Fig. 9-3), probably from non-Semitic populations of the East. Until recently, it was a lost culture; unknown to **Herodotus** (484–425 BCE). Centered in the Euphrates Valley in the Chaldean plains, Sumeria contained the ancient city of Ur, three times its capital. Sumerians were the first to develop writing (3000 BCE) in the form of cuneiform (wedge-shaped) script etched on soft clay tablets which were allowed to harden into a permanent record. (Fig. 9-4). In the next thousand years, the crude pictorial writing developed into a phonetic system of communication that produced history and literature! Literary works produced the first half of the second millennium BCE were excavated between 1889 and 1900 at Nippur, an ancient scribal center, about 100 miles from Bagdad. Many of these works, found in multiple sources copied from much earlier writings, have provided a rich history of the civilization.



**Fig. 9-2.** The Fertile Crescent, where agriculture began in 8000 BCE. Source: Leonard (1973).

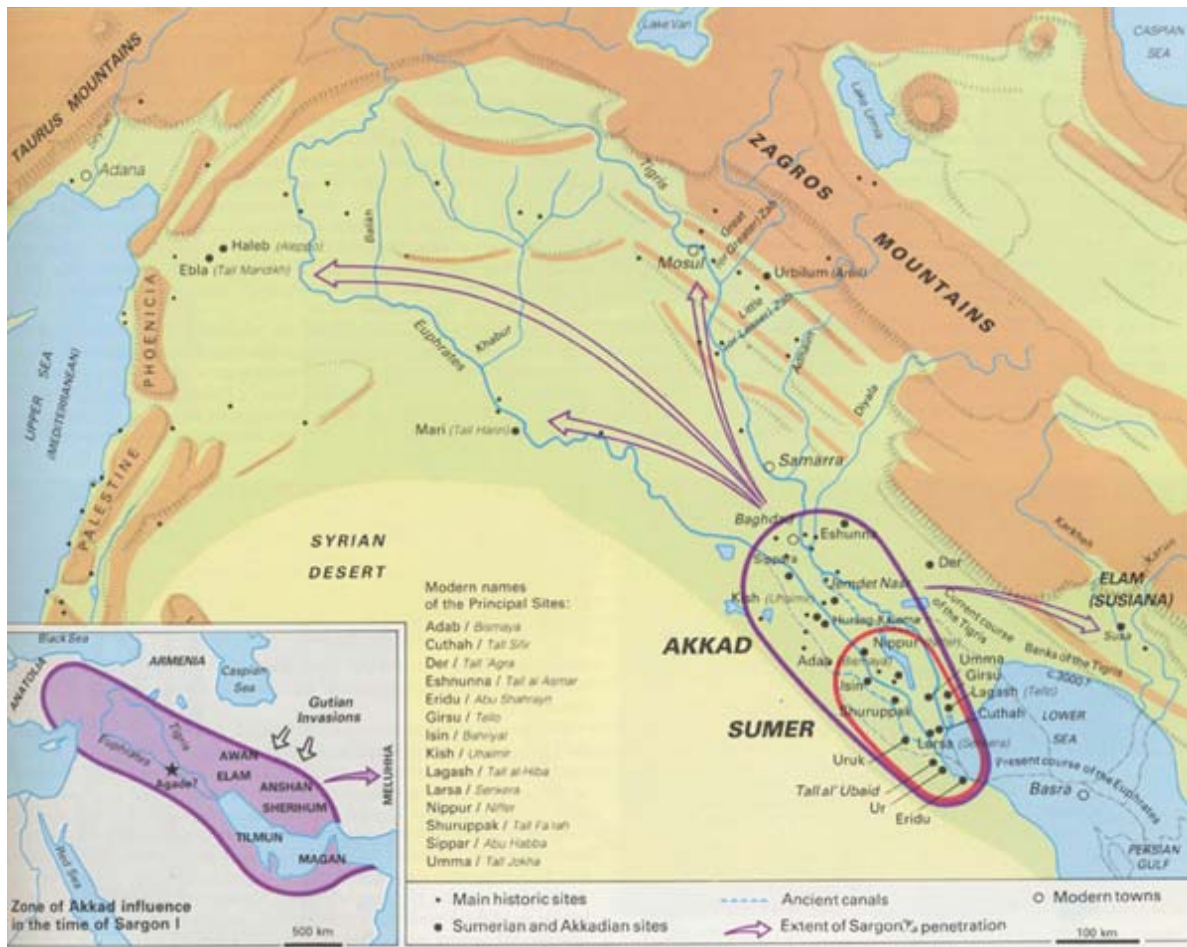


Fig. 9-3. Sumer and Akkad, 3500–2000 BCE. Source: Harper Atlas of World History (1992).

Sumerians introduced canals and were among the first systematic agriculturists. By 3000 BCE there were extensive irrigation systems (Fig. 9-5) branching out from the Euphrates river controlled by a network of dams and channels. The main canals were lined with burned brick and the joints sealed with asphalt. Keeping irrigation canals free of silt was an endless struggle for downstream farmers. At its peak 10,000 square miles were irrigated.

The legendary Sargon I known as Sargon the Great (2334–2279 BCE) founded the Akkadian-Sumerian Empire. In a tale similar to that of Moses a thousand years later he is discovered in a reed basket!! *“The river bore me away and bore me to Akki the irrigator who received me in the goodness of his heart and reared me in boyhood. Akki the irrigator made me a gardener. My service as a gardener was pleasing to*



Fig. 9-4. Early cuneiform writing was inextricably related to agriculture. These 5 Sumerian clay tablets dating to 3000 BCE appear to be associated with crops and livestock.

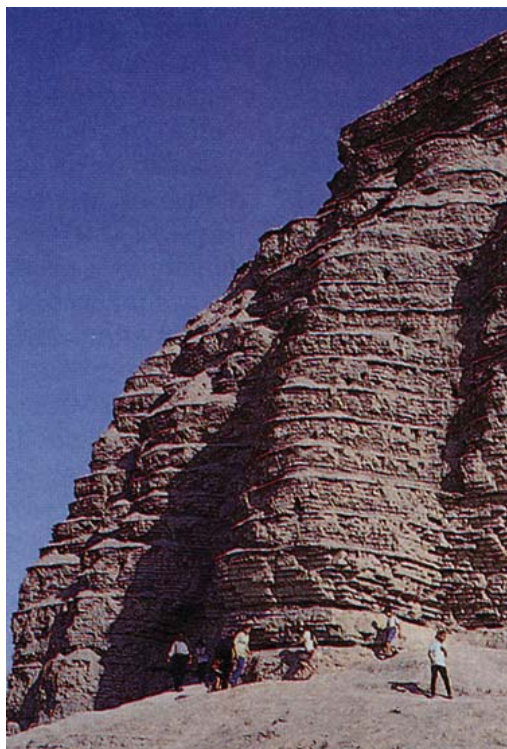
*Istar and I became King*”. The Akkadian empire stretched from the Mediterranean to southwest Iran with Agade, (a variant pronunciation of Akkad) as its capital.

**Babylonia (Gate of God) and Assyria (2000 to 500 BCE)**

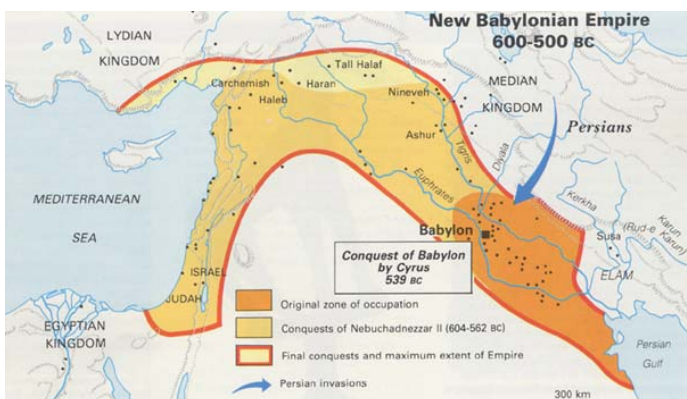
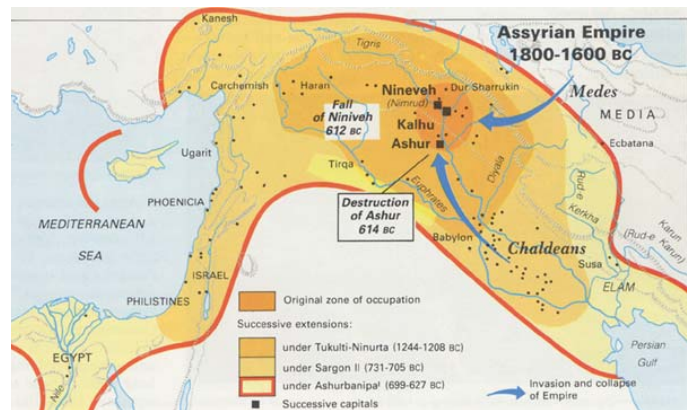
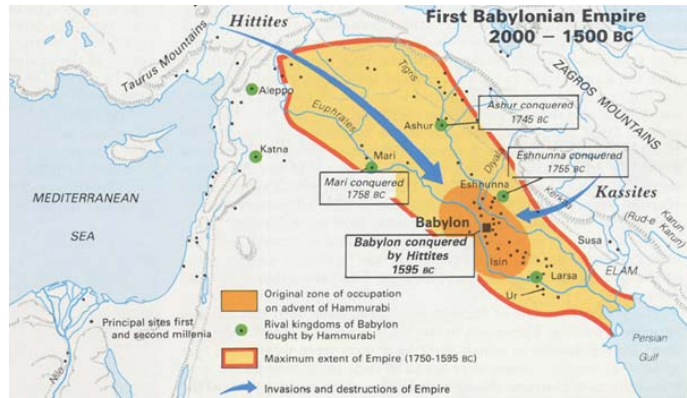
In the second millennium BCE, the great civilization along the Euphrates known to as Babylonia formed from the unions of Akkadia and Sumerias with Babylon as its capital (Fig. 9-6). Historic figures include **Hammurabi** the lawgiver (ca 1750 BCE) and **Nebuchadnezzar** (villain in the book of Daniel), who was the King of Babylon (695–562 BCE). Temples called ziggurats (as was the tower of Babel), a temple tower consisting of a lofty pyramidal structure were built in successive stages with outside staircases and a shrine at the top (Fig. 9-7). The Hanging Gardens of Babylon (Fig. 9-8) long considered one of the seven won-



**Fig. 9-5.** An early shaduf, Akkadian period, 3rd millennium BCE. Source: Singer et al. (1954)



**Fig. 9-7.** Ziggurat of Aqa Quaf 1400 BCE. Source Science 293:32 (2001).



**Fig 9-6.** Babylonian and Assyrian Empires 2000–144 BCE. Harper Atlas of World History, 1992

ders of the ancient world was supposedly built for Nebuchadnezzar's home-sick bride who longed for her far-away hills. Gardens 75 feet high, were irrigated by spiral pumps with royal chambers located under terraces. Babylonian agriculture images include a plow containing a seed drill, beer drinking (Fig. 9-9) and water lifting with a shaduf (Fig. 9-5).

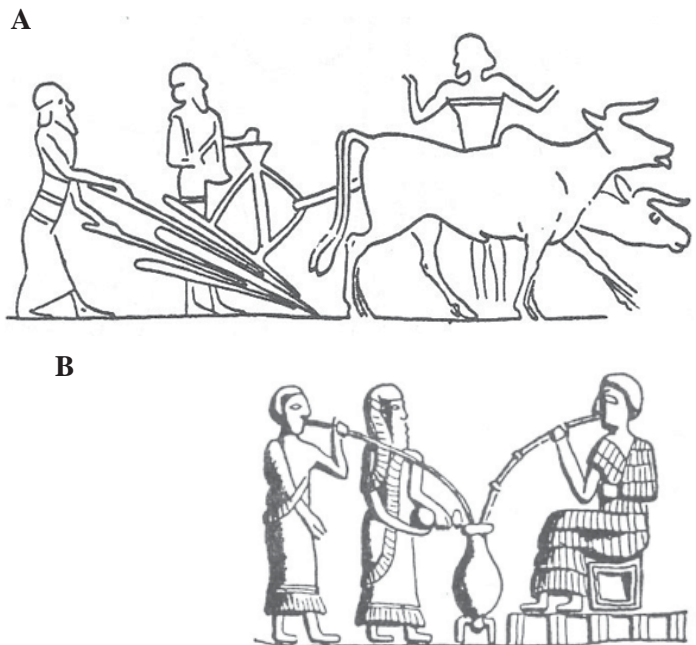
The Assyrian empire was located 2000 miles north of Babylon. Its government was basically an instrument of war. Temple cities contained great bas-reliefs that pictured pollination of the date palm (Fig. 9-10).

### Mesopotamian Agriculture

There are rich literary sources for Mesopotamian agriculture. A cuneiform text from Nippur called *The Dialogue between the Hoe and the Plow* is an amusing source of agricultural information dating from between 1900 and 1600 BCE, but may well have older origins, perhaps belonging to the UR III period (ca. 2100 to 2000 BCE). See Reading 9-1. A cuneiform fragment as early as 1800 BCE concerns grape budwood and suggesting that the technique of grafting was known at that time. (Barrie Juniper, personal communication; Harris et al., 2002). The Code of Hammurabi contains many laws concerning agricultural crop practices such as irrigation, and pollination of the date palm (Reading 9-2; see also Fig 9-9). A cuneiform tablet con-



**Fig. 9-8.** Hanging Gardens of Babylon. A 19th century conception. Source: Berrall (1966).



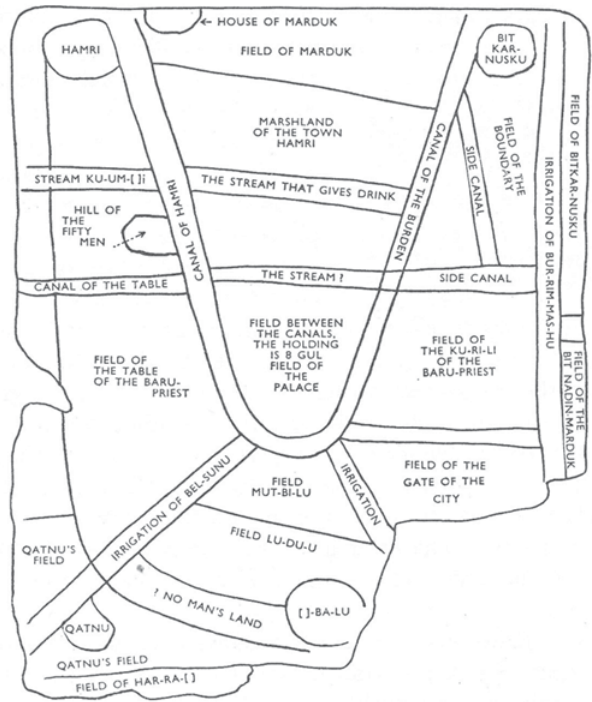
**Fig. 9-9.** A. Babylonian scratch plow with seed drill. B. Drinking beer through tubes from a Syrian seal. Singer et al. (1954).

**Fig. 9-10.** God pollinating the date palm. Information on the true function of pollen languished for almost 2000 years.

A



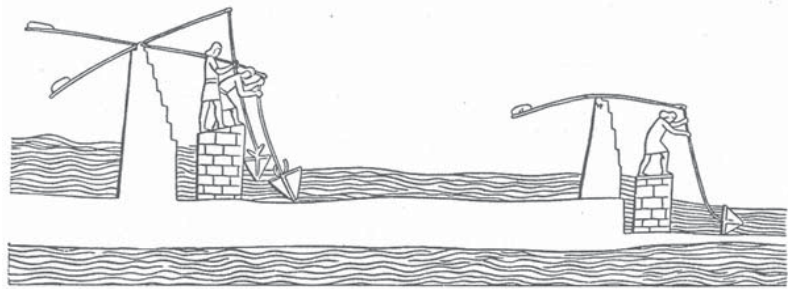
B



C



D



**Fig. 9-11.** Irrigation technology. Source: Singer et al. (1954).

- A. Map of fields and irrigation canals near Nippur, Mesopotamia from cuneiform tablet, ca 1300 BCE. See translation in B.
- B. Translation of A.
- C. Assyrian Dam of rough masonry and mortared rubble, curved to withstand the flow of the river Khosr above Nineveh.
- D. Raising water from the river with shaduf by Assyrians. Three men operate a double lift. The shadufs, on mud uprights, stand at two levels on the river bank, and in front of each a brick platform is built out into the river for the men who fill and empty the buckets. From the palace of Sennacherib at Nineveh, Mesopotamia 7th Century BCE.

sidered the restoration of a document from 1500 BCE from the ancient Sumerian site of Nippur may be the first farmer's almanac. It consists of a series of instructions addressed by a farmer to his son guiding him throughout the year's agricultural activities (Kramer, 1981, Chapter 4). A document tablet from the same period described a myth (Inanna and Shukallituda: the Gardener's Mortal Sin) and reveals the horticultural technique of windbreaks, planting shade trees in a garden or grove to protect plants from wind and sun. A cuneiform tablet from about 1300 BCE shows a map of fields and irrigation canals (Fig. 9-11 A,B). An Assyrian herbal in the 7th century BCE named 900 to 1000 plants. Irrigation technology includes dams, canals, and water-lifting technology (Fig. 9-11 C,D). Agricultural images are presented in Fig. 9-12 to 14.



**Fig. 9-12.** Drawings of trees, Assyria. Note sophisticated representation of a “symbolic” palm on the right. Source: Gothein 1966. p. 30,31



**Fig. 9-13.** Ivory plaque 800 BCE in Syria based on Egyptian presence. The Nile gods of Upper and Lower Egypt symbolically binding stalks of papyrus into the same bundle to represent the unification of Egypt. Source: Syria p.108



**Fig. 9-14.** Terra cotta and kitchen imprints—1800 BCE—from city-state of Mari. Moulds may have been used in the production of bread and pastries, and perhaps for cheese. Source: Syria p.101

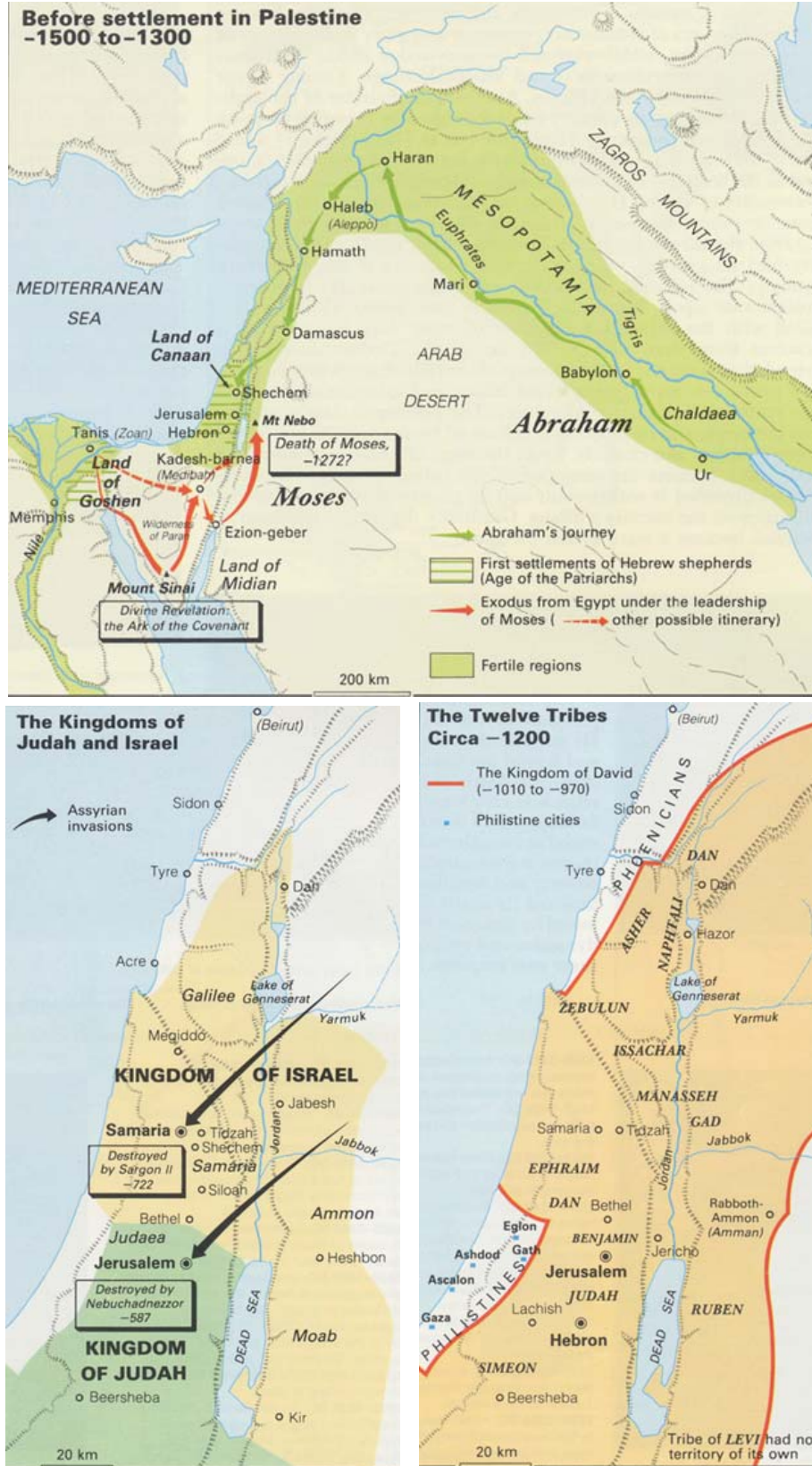


Fig. 9-15. Judea and Ancient Israel, 1600 to 587 BCE. Source: Harper Atlas of World History (1992).



**Judea (1200–587 BCE)**

We know most about this culture (Fig. 9-15) because of the impact of many books of the bible which have come to us almost intact. In the biblical literature, common agricultural and horticultural practices are discussed but the interpretations are usually religious or moral. The moral lessons have been dissected and interpreted and have become part of our cultural and religious heritage. However, the writings can also be read from a reverse point of view, that is, we can read them for information of technological practices. A reading of the scriptures tells us much about horticulture and agriculture of this period.

*And Noah began to be a husbandman, and he planted a vineyard, and he drank of wine (Genesis 9:20–21)*

*...and they shall beat their swords into plowshares and their spears into pruning hooks; nations shall not lift up sword against nation; neither shall they learn war any more. (Isaiah 2:14).*

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