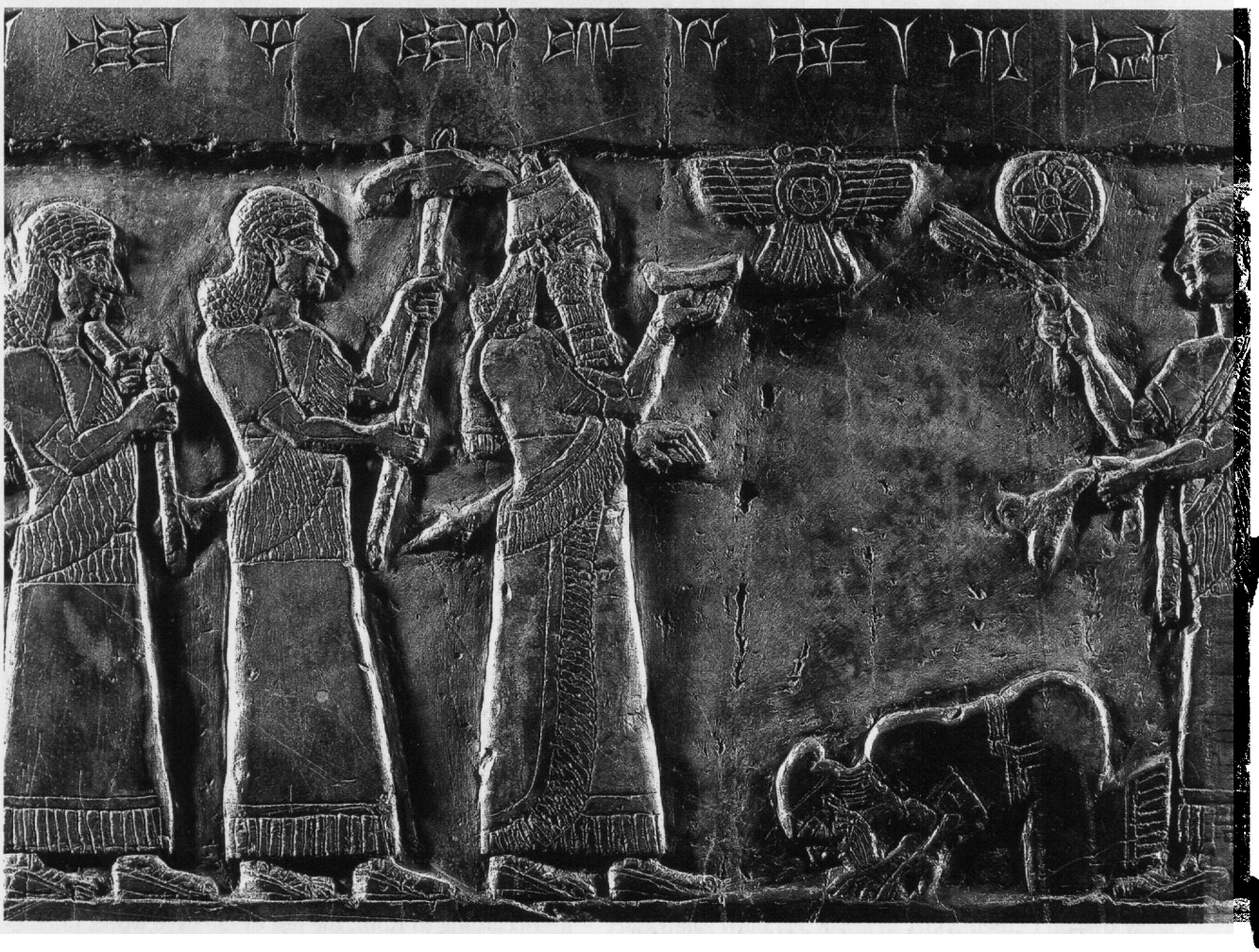
How We Know Wh



Synchronisms with Egyptian and Assyrian Rulers Hold the Key to Dates of Israelite Kings

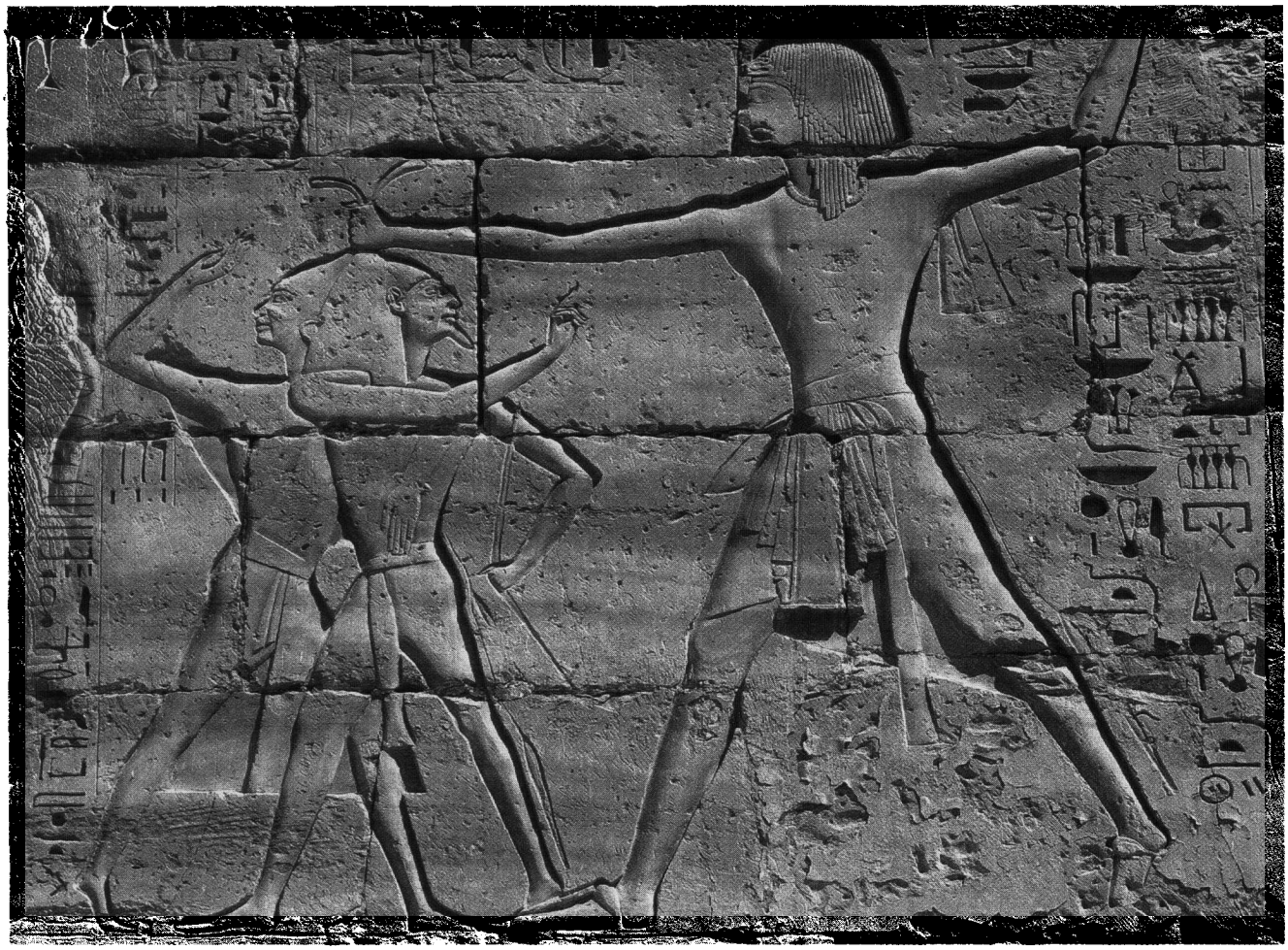
KENNETH A. KITCHEN

Ever wonder how scholars date the reigns of the Israelite kings but were too embarrassed to ask? If so, this is the article for you.

The short answer is that scholars use a variety of approaches and data from numerous sources to deduce regnal years. Take, for example, the reign of King Solomon, to cite one of ancient Israel's most illustrious rulers. We could search for an ancient inscription that gives the year when Solomon became king or the year of his death, but we would almost certainly come up empty-handed—inscriptions from tenth-century B.C. Israel are simply too rare.

Does that mean we have no hope of knowing when Solomon ruled? No—but we need to look a bit further afield. The Bible records that after Solomon's death, the kingdom split in two: Solomon's son Rehoboam ruled the southern kingdom of Judah and Jeroboam I

en Solomon Ruled



PHOTOS BY ERICH LESSING

ruled the northern kingdom of Israel. If we could establish the date of the split, we would know the year of Solomon's death; we could then add 40 years to that date (the length of Solomon's reign according to the Bible [1 Kings 11:42]) and arrive at the year he began to rule.

Easy to say, but how to do? Luckily, we need not rely on data only from ancient Israel. For better or worse (often for worse), Israel was sandwiched between Assyria (and, later, Babylonia) to the north and Egypt to the southwest. These mighty empires frequently swept through Israel on campaigns of conquest, which was bad for Israel's ancient inhabitants but good for modern historians because the conquerors often recorded the years of their campaigns, their allies and their opponents.

For example, from Assyria we have a record of 261 continuous years, with names and dates of kings; each year was also named after a high official, and important

SQUEEZED BETWEEN the expansionist empires of Assyria and Babylon to the north and Egypt to the south, the inhabitants of ancient Israel and Judah often suffered disastrous invasions at the hands of their neighbors. Fortunately for modern historians, those who triumphed liked to preserve their victories in stone. For example, in a relief commemorating his Palestinian campaign near the end of his reign (above), Pharaoh Shoshenq I (945-924 B.C.) is poised to strike down his puny Semitic adversaries, whom he grasps by their hair. The Black Obelisk of Assyrian conqueror Shalmaneser III (859-824 B.C.) shows another scene of triumph, in which he accepts tribute from a prostrate King Jehu of Israel (opposite; the two photos have been merged electronically). Extra-Biblical artifacts such as these can enhance and corroborate the Biblical account in many ways, writes author Kenneth Kitchen. When considered in light of the various calendrical methods used by the neighbors of ancient Israel and Judah, these three streams of evidence—the Biblical account and the Egyptian and Mesopotamian records—help establish the dates of Biblical events, including the reigns of such rulers as Solomon.

events in that year are noted. But although these records can be used to track events based on Assyrian years, how do we correlate their years with ours?

This is where Mother Nature steps in. We can calculate astronomical events such as solar and lunar eclipses back through the years. The Assyrians recorded a solar eclipse during the reign of Assur-dan III; modern astronomers have calculated that the eclipse occurred in 763 B.C. We thus have a peg for a long line of Assyrian rulers; the 261 years mentioned above are fixed to 910 to 649 B.C.

Both the Assyrian and Egyptian historical records can help us assign a date to Solomon's rule. First, the Assyrians. In the ninth century B.C., Shalmaneser III (859-824 B.C.) mentions in his annals two kings of Israel 12 years apart, in Shalmaneser's sixth and 18th years: Ahab in 853 B.C., because he had joined an alliance that sought to block the Assyrians and Jehu in 841 B.C., because he paid tribute to Shalmaneser that year.[1] (We'll address the matter of the double dates shortly.) The Bible informs us that there were two kings between Ahab and Jehu: Ahaziah, who ruled for two years (1 Kings 22:51), and Joram (or Jehoram), who ruled for 12 years (2 Kings 3:1).

At first blush, we seem to have arrived at a conflict: the Assyrian record puts 12 years between Ahab and Jehu, while the Bible has 14 years between them. But the ancients had different ways of reckoning regnal years. The fact is that ancient kings never conveniently died at midnight on the last day of the year, thus leaving their successors a fresh start on New Year's Day. They, like everyone else, died at all times throughout the year. When a new ruler ascended the throne in mid-year, to whom would the year be assigned—to the dead king or to the new king? There were two ways of solving that problem. The Assyrians and Babylonians credited the year to the dead king and called it the new king's accession year; the new king's Year 1 did not begin until the following New Year's Day. We call that the accession-year system, or post-dating.

In Egypt (and elsewhere) the new king reckoned the partial year as his Year 1, disregarding his predecessor. This is the non-accession-year system, or ante-dating. And that's what the kings of Israel used: The two years of Ahaziah were just one full year plus a bit from his predecessor, and the 12 years of Joram were 11 full years plus a bit from his predecessor. That is how 14 can equal 12: By the Israelite system, Ahaziah and Joram ruled for 14 years, but according to the Assyrian system, which only counted full years, they ruled for 12 years, as Shalmaneser III records.

Why were the kings of Israel using the Egyptian system? Remember that their founder, Jeroboam I, had been in exile in Egypt (see 1 Kings 11:40, 12:2); he no doubt became accustomed to Egyptian ways and introduced their method of reckoning when he founded the breakaway northern kingdom.

Now that we know the system that was used for the kings of Israel, we can count from Ahab all the way back to Jeroboam I. When we count only the full years of the kings as listed in the Bible (that is, subtracting one from the number listed), we find that they total 78 full years. Going back 78 years from 853/852 B.C.,

Israel's Kings

Extra-Biblical evidence used to date the reigns of the kings of Israel and Judah is shown below in italics.

The United Monarchy:

Saul c. 1030-1009 B.C.
David c. 1009/1001-971/970
Solomon c. 971/970-931/930
Siamun's triumphal relief commemorating campaign against Philistines (c. 970-960)

The Divided Monarchy:

Kingdom of Judah 930-586 B.C.		Kingdom of Israel 930-722 B.C.	
Rehoboam	931/930-913	Jeroboam I	931/930-908
Shoshenq's triumphal relief at Karnak (925) and stela at Silisila (924) commemorating campaign in Israel and Judah			
Abijam (Abijah)	913-911	Nadab	908-907
Asa	911-870	Baasha	907-884
		Elah	884-883
		Zimri	883
		Omri	883-872
Jehoshaphat	870-846	Ahab	872-853
		Annals of Shalmaneser III (853/852) mentioning Ahab	
		Ahaziah	853-852
Jehoram	846-841	Joram	852-841
Ahaziah	841	Jehu	841/818
Athaliah	841-835	*Annals of Shalmaneser III (841/840) mentioning Jehu*	
Jehoash	835-801	Jehoahaz	818-802
Amaziah	801-783	Jehoash	802-787
Azariah (Uzziah)	783-732	Jeroboam II	787-748
		Zechariah	748-747
		Shallum	747
Jotham	750-735	Menahem	747-738
		Pekahiah	738-737
Ahaz	735-727	Pekah	737-732
Hezekiah	727-697	Hoshea	732-722
Manasseh	697-642		
Amon	642-640		
Josiah	640-609		
Jehoahaz	609		
Jehoiakim	609-598		
Jehoiachin	598-597		
Zedekiah	597-586		

the end of Ahab's reign, we get 931/930 B.C. for the beginning of Jeroboam I's reign, and thus also for the beginning of Rehoboam's reign—and thus also for the end of Solomon's reign. The dates of the kings of Judah give us the same result, keeping in mind that Judah used the accession-year system.[2] Add 40 years to 931/930 B.C. and we get the beginning of Solomon's rule at 971/970 B.C.

Why the double dates? Today we count our years from mid-winter to mid-winter (January to December), but the people of the ancient Near East counted from spring to spring (from Nisan to Adar in the Hebrew calendar) or from autumn to autumn (Tishri to Elul in the Hebrew calendar). So an ancient year would span parts of two of our years. This ambiguity in dates existed even in ancient times because neighboring kingdoms used different systems. Years in the kingdoms of Israel and Judah began in different seasons; a year in one kingdom, therefore, straddled two years in the other (scholars today are still uncertain which kingdom began in which season!). With three different ways of counting the start of a year (spring and autumn in ancient times and winter in modern times) and with two ways of counting royal reigns (accession and non-accession), is it any wonder that calculating ancient dates is a bit complex? To make matters even more complicated, the Egyptian year ran from summer to summer and because it had no leap year, it would lose a day every four years.

The Egyptian records also help us date Solomon's reign. We have a firm date of 664 B.C. for the beginning of Egypt's XXVIth Dynasty. Before 664 B.C. we have the 26-year rule of Taharqa (Biblical Tirhakah), bringing us to 690 B.C. His two predecessors, Shebitku and Shabako, reigned for 25 years, taking us back to 715 B.C.[3] Preceding them was the XXIInd Dynasty, a line of ten kings founded by the redoubtable Shoshenq I (Biblical Shishak), who invaded Judah (in the fifth year of Rehoboam's rule; 1 Kings 14:25-26; 2 Chronicles 12:1-9) and Israel (according to Shoshenq's commemorative inscription).

We can calculate the years of these ten kings back to Shoshenq; they add up to at least 227 or, more likely, 230 years (the reason for the ambiguity is that a king's incomplete year might be short—two months, say—or long—perhaps ten months; over a span of centuries such variations lead to discrepancies of several years). That is the span from 715 to 945 B.C., the beginning of Shoshenq's rule. We also know that Shoshenq led his campaign into Palestine in his 20th or 21st year because his stela at Silisila, dated to his Year 21, records that immediately on his return he began a massive building project that included a vast forecourt, a great side gate (the "Bubastite Gate") and a huge triumphal scene at the Karnak Temple of Amun in Thebes.[4] But Shoshenq died suddenly and these great works were left unfinished. Only the triumphal scene

ARCHIVES MISSION MONTET

ONE OF A KIND. A double-headed ax with crescent-shaped blades, held by an opponent in the lower right corner of a triumphal relief erected by Pharaoh Siamun (979-960 B.C.), is unlike any other weapon represented on Egyptian reliefs and therefore, author Kitchen argues, must refer to a specific event. Because the ax seems to come from the Aegean or Balkans, where the Philistines originated, perhaps Siamun is portrayed in battle on the Philistine coast adjacent to Judah. The Bible mentions that a pharaoh conquered Gezer, a Philistine town, and gave it as a dowry to his daughter, Solomon's wife (1 Kings 9:16); could Siamun, Solomon's contemporary, be that pharaoh?

was completed; the gate was built, but its decoration was hardly begun and the columned court's porticoes were all left in the rough. Pharaohs did not wait many years before commemorating victories, so Shoshenq's campaign must have occurred in about 926/925 B.C., shortly before his death. Remember that the Bible records that this campaign took place in Rehoboam's fifth year. Once again we get 931/930 B.C. for the death of Solomon and the beginning of Rehoboam's (and Jeroboam I's) reign. Note how well the dates derived from Egyptian evidence match—independently—the dates derived from the Assyrian evidence.

In addition to these two streams of dates, we have two other lines of evidence that point to a tenth-century B.C. date for Solomon: his Egyptian marriage and the extent of his mini-empire.

The Bible notes repeatedly that Solomon married the daughter of a pharaoh and received the city of Gezer as

ANDREA JEMOLO

FATHERS, DAUGHTERS, HUSBANDS, WIVES. The pronouncement of Amenophis III (opposite) that "from of old no [Egyptian] king's daughter has been given to anyone" convinced many Old Testament scholars that, contrary to the Biblical account, Solomon could not have married a daughter of a pharaoh. This assumption ignores changes in royal proprieties that may have occurred in the four centuries between the reigns of Amenophis III (1386-1349 B.C.) and Siamun (979-960 B.C.), Solomon's contemporary in Egypt. The granddaughter of Amenophis III himself, princess Ankhsenamun, widow of the young King Tutankhamun (1334-1325 B.C.), to whom she is shown applying unguent in the brightly painted relief at left, offered herself in marriage to a Hittite prince to avoid being married to a commoner. This and other Biblical and Egyptian references indicate that women from Egyptian royal families did occasionally marry foreigners during Solomon's era; other sources attest that the practice ceased sometime in the sixth century B.C.

a dowry from his royal father-in-law (1 Kings 3:1, 7:8, 9:16,24, 11:1). This would have happened in the early part of his reign, within about 970-960 B.C., which corresponds to the reign of Pharaoh Siamun (979-960 B.C.), of the XXIst Dynasty.

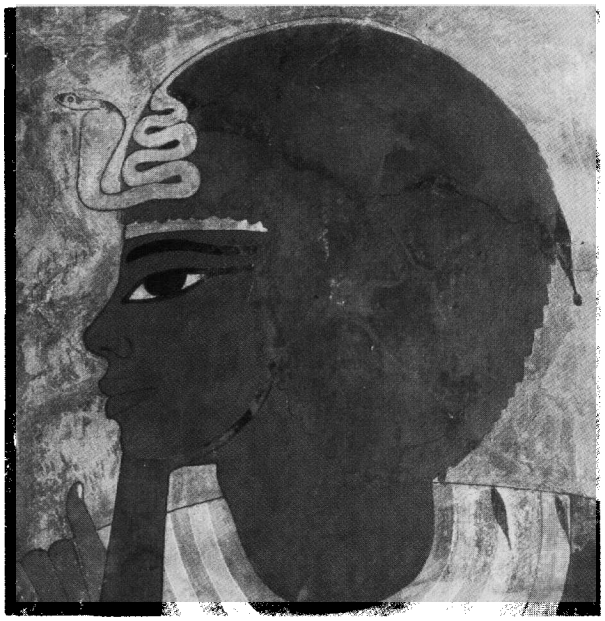
Siamun, as it happens, is the only pharaoh of this dynasty to mention on his monuments any active involvement with military campaigns in the Levant. A portion of his triumph scene at the temple of Amun at Tanis[5] clearly bears the title "Siamun, beloved of Amun" and shows him smiting an enemy who grasps a remarkable double ax with crescent-shaped blades.[6] This weapon seems to come from the Aegean or the Balkans. It is unique in Egyptian reliefs and is not suited simply to be part of a general depiction of battle but must refer to a specific event.

Siamun makes no mention of campaigns far from Egypt, so the scene at Tanis likely took place close to home. The first place Siamun and his army would have reached on any campaign would have been Gaza and the Philistine coast. Here is a plausible scenario: Siamun and Solomon, looking out for their own economic interests, found it prudent to unite in crushing the growing Philistine power on the trade route between Egypt and Israel. For his aid to the pharaoh, Solomon was rewarded with the strategically located Gezer.

What about the pharaoh's gift of a daughter to Solomon? Many Old Testament scholars, in their arrogance and ignorance, have labeled this report as impossible, citing as their only evidence the remark by Amenophis III (c. 1380 B.C.) that "from of old no [Egyptian] king's daughter has been given to anyone."[7] But more than 400 years later, customs had changed (no one in England, for example, expects the society of Elizabeth II to be at all similar to that of Elizabeth I, half a millennium ago). What may have been true for Amenophis III is not relevant for Siamun. Indeed, we have limited but clear evidence of change. In 1 Kings 11:19-20 we find a pharaoh giving his sister-in-law in marriage to the young Edomite prince Hadad not long before Solomon's reign, that is, shortly before 970 B.C. So we have the practice recorded twice in the Bible.

We also have data on this practice from the Egyptians themselves. The most striking notice concerns Psusennes II (960/959-945 B.C.) giving the hand of his daughter in marriage to a young Libyan noble, Osorkon, the son of Shoshenq, the great chief of the Libyan tribe Ma, before Shoshenq took the throne of Egypt as Shoshenq I. The Egyptians at first clearly regarded Shoshenq I as a foreigner. At Thebes we have a dateline that reads, "Year 2 of the Great Chief of the Ma, Shoshe(n)q," and the spelling of his name includes a determinative for "foreigner" (a determinative is an unpronounced hieroglyphic sign that indicates the category of a word). Here we have a strong parallel to the marriage of Solomon and pharaoh's daughter: a marriage of royal daughters to foreign Semites.[8]

During the following two dynasties, the XXIInd and XXIIIrd, new kings repeatedly married off daughters to commoners. But long before that, Ankhsenamun, the widow of Tutankhamun and granddaughter of Amenophis III,



LOUVRE, PARIS/BRIDGEMAN ART LIBRARY

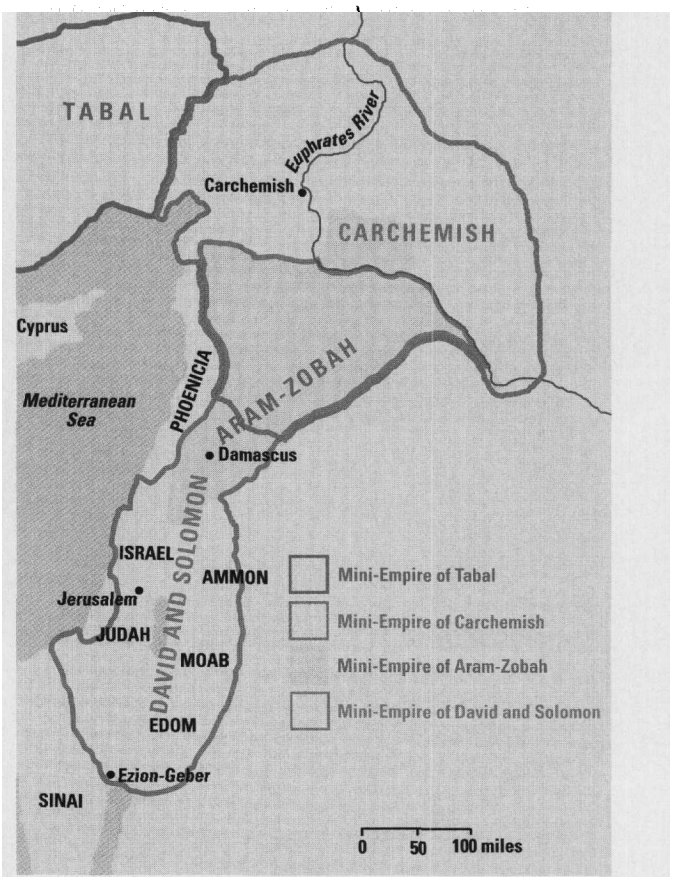
no less (he who claimed that pharaohs did not marry off their daughters to foreigners), offered herself to a Hittite prince to escape marrying a commoner!

By the sixth century B.C., if we can believe Herodotus,[9] Egyptian kings again became possessive of their daughters. The royal generosity with princesses seems to be a phenomenon peculiar to the tenth to the eighth centuries B.C. Solomon and the daughter of pharaoh fit nicely into this window.

The nature and extent of the mini-empire of David and Solomon is also unique to one time period, from about 1200 B.C. to about 900 B.C. Before those centuries the Levant was dominated by the great empires of Egypt and the Hittites; after those centuries the menace of Assyria crept nearer and nearer, eventually to take all, until being itself succeeded by even greater empires, the Neo-Babylonian and Persian. Only within those three centuries, when the fat cats were away could the mice play.

We have four mini-empires during this window.[10] In the far northeast Tabal arose out of a major province (Tarhuntassa) of the now-defunct Hittite Empire. Safe behind the Taurus mountains, it could survive until Assyria finally reached it in the eighth century B.C. A second mini-empire, Carchemish, made vassals of former Hittite possessions in north Syria. Rulers of Carchemish, like those of Tabal, dared to call themselves Great Kings, adorning their monuments with a particular combination of symbols: a spiral-shaped volute on the tops of columns, denoting "great" in Hittite hieroglyphics, and a tall triangle, meaning "king." But after about 920 B.C. or so, when the rising mini-empire of Aram-Zobah had come to dominate the area, the rulers of Carchemish, having lost all their vassals, shed the volute, using on their monuments only the tall triangle, the symbol of ordinary kings.

Aram-Zobah's extent, and its fall at David's hand, is



MINI-EMPIRES MULTIPLY. In the absence of an overarching military power in the Near East from 1200-900 B.C., regional empires flourished in the Levant and surrounding areas. On the Anatolian peninsula, Tabal arose from the remains of the dwindled Hittite empire; to its east in northern Syria, Carchemish blossomed. Aram-Zobah later extended from the Biqa Valley in modern Lebanon south to the Galilee and north to Damascus and the Euphrates. The mini-empire of David and Solomon at its height came to dominate the Aram-Zobah empire as far north as the Euphrates, as recorded in 2 Samuel 8 and 10, and controlled territory from the Mediterranean to Edom, Moab and Ammon east of the Jordan and south to the Gulf of Aqaba. With the consolidation of power in Assyria under Ashur-nasirpal II (883-859 B.C.), however, the era of mini-empires in the ancient Near East came to an abrupt close.

recorded in 2 Samuel 8 and 10. The empire of its ruler, Hadadezer, had reached from the Biqa Valley in Lebanon (Zobah), to Damascus, south through Geshur and Maacah toward Galilee and to the north, as far as the Euphrates.

The fourth mini-empire belonged to David and Solomon. A united kingdom of Israel, including both Judah and Israel, took direct control of Aram-Zobah and Damascus, and of Edom, Moab and Ammon, east of the Jordan. David's dominance extended all the way up to the

continues on page 58

Keep Reading See related articles on our Web site: www.biblicalarchaeology.org

Solomon

continued from page 37

Euphrates. Such a clearly delimited mini-empire cannot be compared, as some scholars have mistakenly done, to the vast realms later held by Assyria, Babylon or Persia. The mini-empire is strictly a phenomenon of the 12th to 10th centuries.

We have seen several lines of evidence converge to place Solomon in the mid-tenth century B.C. The most direct are the Assyrian and Egyptian king lists, which agree very nicely with the Biblical royal chronologies and point to 970-930 B.C. as the time of Solomon's rule. Our date for Solomon also dovetails with geo-political realities. Pharaohs were marrying their daughters to foreign rulers; mini-empires such as David's and Solomon's could flourish in the centuries between 1200 and 900 B.C., when the power of the great empires to the north and south had waned.

The story of Solomon cannot have been fiction dreamed up in the early Hellenistic period (300 B.C.), as some Biblical minimalists claim. At that late date there were no resources upon which to base such "dreams," especially with such accuracy as we find from all these sources. Solomon's dates are secure.

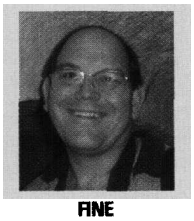
Authors


GILL

Dan Gill ("It's A Natural," p. 22) is a senior geologist with the Geological Survey of Israel. A member of many scientific committees and societies, including the American Association of Petroleum Geologists, Gill holds the rank of Research Scientist Grade A+, the equivalent of a full professor at a university. His article on Hezekiah's Tunnel, "How They Met" (July/August 1994), was named the best article in **BAR** for 1994 and 1995.


KITCHEN

Kenneth A. Kitchen ("How We Know When Solomon Ruled," p. 32) is professor emeritus of Egyptology at the University of Liverpool, England. He has published some 200 scholarly articles and books, including such landmark references as *Ramesside Inscriptions, Historical and Biographical, I-VIII* (Blackwell) and *The Third Intermediate Period in Egypt* (Aris & Phillips). In 1999 Kitchen published *Poetry of Ancient Egypt* (Astrom) and is now working on the third and fourth volumes of *The World of Ancient Arabia* (Liverpool Univ. Press).


FINE

Steven Fine ("Why Bone Boxes?" p. 38) holds the Jewish Foundation Chair of Judaic Studies and heads the department of Judaic studies at the University of Cincinnati. He is the author of *This Holy Place: On the Sanctity of the Synagogue During the Greco-Roman Period* (Notre Dame Univ. Press) and the editor and curator of *Sacred Realm: The Emergence of the Synagogue in the Ancient World* (Oxford and Yeshiva Univ. Presses).

[1]See for example, A. Leo Oppenheim, trans., "Babylonian and Assyrian Historical Texts," in James B. Pritchard, ed., *Ancient Near Eastern Texts* (*ANET*) (Princeton, NJ: Princeton Univ. Press, 1950), p. 279.

[2]We need to allow a brief co-regency of Jehoshaphat with his sick and aged father, King Asa, when the new Israelite king, Ahab, may have posed a threat to Judah. It is significant that the two most competent scholars on Hebrew monarchy chronology, E.R. Thiele and Gershon Galil, both come to this same basic date of 931/930 B.C., from two quite independent approaches. See Thiele, *The Mysterious Numbers of the Hebrew Kings*, 3rd ed. (Grand Rapids, MI: Eerdmans, 1986); and Galil, *The Chronology of the Kings of Israel and Judah* (Leiden: E.J. Brill, 1996).

[3]For all these matters, see the full treatment in Kenneth A. Kitchen, *The Third Intermediate Period in Egypt (1100-650 B.C.)* (Warminster: Aris & Phillips Ltd., revised 2nd ed., 1996), pp. xxxiv-xii, 72-76, 174-183, 293-302, 324-325, 372-376, 383-388, 546-559, 575-576 and 583-586. On updated Egyptian chronology, see Kitchen, "The Historical Chronology of Ancient Egypt, A Current Assessment," in *Acta Archaeologica* 67 (1996), pp. 1-13; also in K. Randsborg, ed., *Absolute Chronology, Archaeological Europe 2500-5000 BC* (Copenhagen: Munksgaard, 1996), pp. 1-13; and an updated version including evaluation of the new Tang I-Var text in Manfred Bietak, ed., *The Synchronization of Civilizations in the Eastern Mediterranean during the Second Millennium BC* (Vienna: Austrian Academy, 2000), pp. 29-42.

[4]Ricardo A. Caminos, "Gebel Es-Silsilah No. 100," *Journal of Egyptian Archaeology* 38 (1952), pp. 46-61, plates 10-13; recent translation by Kitchen in Lowell K. Handy, ed., *The Age of Solomon, Scholarship at the Turn of the Millennium* (Leiden: Brill, 1997), pp. 124-125.

[5]Pierre Montet, *Le tombeau d'Osorkon II* (Paris: Mission Montet, 1947), plate IX:1, in photo, which should always be used, and not just the crude and inaccurate line-drawing which is reproduced *ad infinitum*. The scene was wrongly described as anonymous ("unidentified king," and its ax equally wrongly as anachronistic) by James M. Weinstein, in Seymour Gitin, Amihai Mazar and Ephraim Stern, eds., *Mediterranean Peoples in Transition* (Jerusalem: Israel Exploration Society, 1998), p. 193 and note 10, by a crass slip of the pen, with a touch of unjustified hypercriticism.

[6]It is certainly neither a shield (see Alberto R.W. Green, "Solomon and Siamun: a Synchronism between Early Dynastic Israel and Twenty-first Dynasty Egypt," *Journal of Biblical Literature* 97 [1978], pp. 364-365; H. Darrell Lance, "Solomon, Siamun and the Double-Ax," in Frank Moore Cross, et al, eds., *Magnolia Dei ... in Memory of G. Ernest Wright* [New York: Doubleday, 1976], pp. 213-124, 220, notes 33-37) nor a halter, nor a set of handcuffs (see Paul S. Ash, *David, Solomon and Egypt, a Reassessment* [Sheffield, U.K.: Sheffield Academic Press, 1999], pp. 41 and 45), which were ovals with a central slot! The foe grasps the ax at its socket, from which protrudes a (wooden) handle, possibly shown broken at a shallow angle, so that (magically) he and it could not harm the king.

[7]William L. Moran, *The Amarna Letters* (Baltimore, MD: Johns Hopkins Univ. Press, 1992), pp. 8-9, letter 4:4-22.

[8]For all of these matters, see Kitchen, *Third Intermediate Period*, and "Egyptian Interventions in the Levant in Iron Age II," in William G. Dever, ed., *Symbiosis, Symbolism and the Power of the Past: Canaan, Ancient Israel and their Neighbors* (American Schools of Oriental Research), in press.

[9]Book III, par. 3.

[10]Kenneth A. Kitchen, "The Controlling Role of External Evidence in Assessing the Historical Status of the Israelite United Monarchy," in B.W. Winter, ed., *Supplement to the Tyndale Bulletin* (Grand Rapids, MI: Eerdmans), in press.