

*OCCASIONAL PAPERS*  
*of the*  
*CENTER for BEAD RESEARCH*

OCCASIONAL PAPER No. 4

MAN MAKES HIS MARK:  
7500 YEARS OF THE SEAL

An Exhibit Catalogue

*Peter Francis, Jr.*

THE CENTER FOR BEAD RESEARCH  
4 Essex Street  
Lake Placid, New York 12946 (U.S.A.)

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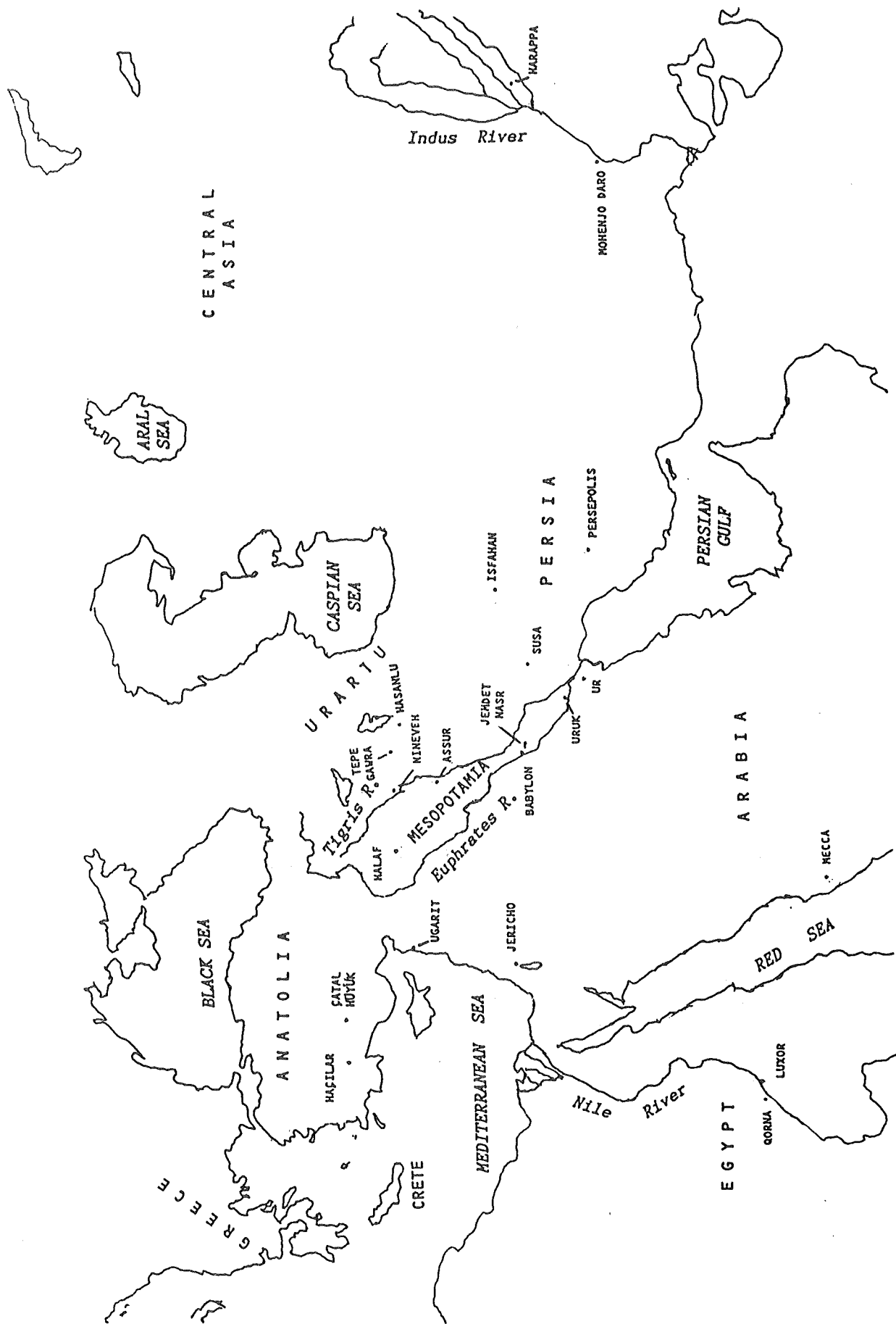
## TABLE OF CONTENTS

Introduction: Seals and Beads	1
BACKGROUND: A FEW TECHNICAL NOTES ON SEALS	3
THE EARLIEST CIVILIZATIONS	5
Halaf Period Stamp Seal	5
CITY STATES OF MESOPOTAMIA	6
Flat Stamp Seals of Western Iran, 4th Millennium	6
THE DEVELOPMENT OF WRITING	7
Cylinder Seals of the Jemdet Nasr Period	7
EMPIRES AND THEIR EBB AND FLOW	8
Cylinder Seals of Mesopotamia	9
Stamp Seals of Other Regions	9
Neo-Babylonian and Neo-Elamite Seals	10
THE PERSIAN EMPIRES	11
Sasanian Stamp Seals	11
THE MUSLIM INVASION	14
Muslim Seals of Iran	15
SEALS, BEADS, OR WHAT?	16
Prehistoric Pendant Amulet	16
Clay Rollers, Ban Chiang, Thailand	16
Faience Beads or Seals	17
Flat Stone Beads or Seals	17
Gaming Piece or Seal Blank	17
SEALS FROM ELSEWHERE	18
Egyptian Scarabs	18
Harappan Stamp Seals	19
The Chinese Chop	19
REFERENCES	20

CHART: SOME CHRONOLOGICAL MARKERS OF SEAL HISTORY, behind Table of Contents  
MAP: MAP OF THE ANCIENT WORLD OF SEALS, facing Chart.

SOME CHRONOLOGICAL MARKERS OF SEAL HISTORY  
(Most dates are approximate)

Mesopotamia, Anatolia, Persia		Other Regions
	B.C.	
First seals at Hassuna	6000	
Rise of Halaf	5500	
Sumarians destroy Halaf;	4400	
Stamp seals become common		
Alishar Hüyük founded	3750	
	3500	First seals at Mehrgarh, Pakistan
Jemdet Nasr Period;	3400	Egypt adopts cylinder seals
Cylinder seals become standard		
Early Dynastic Period	3100	
Gawra Tepe at its height	3400 to 2900	
	2850	Egypt returns to scarab seals
	2600	Rise of Harappa
Sargon the Great	2445 to 2414	Trade with Harappa
Amorite Period	2150	Persian Gulf seals
Elamites of Persia destroy Ur	2000	
Hammarapi; Babylon supreme	1950	
	1800	Egyptians mount scarabs on rings
Kassite and Old Hittite Periods	1750	Fall of Harappa
Assyria conquers Babylon	1100	
Neo-Hittites in Syria	1000	David and Solomon in Israel
Neo-Elamites in Persia		
Ninevah destroyed;	606	
Neo-Babylonian stamp seals		
	600	Greeks wearing signet rings
Achaemenians in Persia	550	
Persia conquers Babylon	539	
	473	China: Late Zhou, first seals
Xerxes loves Esther	440	
End of Neo-Babylonian Period	400	
Alexander burns Persepolis	334	
	300	Romans wearing signet rings
	A.D.	
Parthians begin to take Persia	250	
	220	China: Hans prescribe seal styles
Sasanians in Persia;	224	India adopts Sasanian-type seals
Stamp seals dominate		
Muslims conquer Persia;	642	
Early Muslim stamp seals	652	Muslims conquer Egypt;
		Early Muslim stamp seals
Kufic writing abandoned;	1100	
Handled Muslim seals		Handled Muslim seals
	1200	Wang Mien seals paintings
	1300	Elaborate European signet rings
	1644	China: Qin dynasty; columnar seals
	1776	Americans still using seals.



MAP OF THE ANCIENT WORLD OF SEALS



MAN MAKES HIS MARK:  
7500 YEARS OF THE SEAL

*Peter Francis, Jr.*

Introduction: Seals and Beads

Seals are some of history's most fascinating artifacts. Now ornament and proud bearer of the lapidary's skill, and now identifier, authenticator, and verifier, they were invaluable to the growth of civilization. Our world of credit cards and modems has little need for them, and few of us have ever used one. Yet this is an entirely new phenomenon. As late as the American colonial period, they were necessary for daily business [Jones 1921].

Not only were seals commonplace but they were also uncommonly powerful. In China for 1200 years the mere possession of the "Succession Seal" marked its owner as the Emperor of the Middle Kingdom [Lai 1976:x-xi]. The Bible tells us that, "an edict... sealed with the king's ring cannot be revoked" [Esther 8:8], and the Jews were nearly slaughtered because of this fact. Seals could transcend their symbolic roles to embody the power of the throne itself.

Art historians, epigraphists, and archaeologists have long recognized the value of seals to their disciplines. The scenes and inscriptions upon them, their many official uses, and their association with individuals, sometimes known historical figures, have made them a focus of study.

Their value to bead research has been less widely appreciated. Although long recognized as a class of beads [Beck 1928:1], little attention has been paid to them in that regard. Are seals to be regarded as beads?

Like beads, seals are small perforated objects meant to be worn. They are ornamental and often decorated necklaces or pins. Their amuletic uses also ally them to beads. Some writers tend to discount this function [Gelb 1977:112; Teissier 1984:xxxvii], while others emphasize it. At least some seals or seal-like objects were amuletic: early Halafian seals [Mallowan and Rose 1935:90-1], Kassite prayer seals [Evans 1922:14], talismanic stones from Crete [Kenna 1969], the large Sasanian Gayomard seals [Harper 1973:66], and Egyptian scarabs [Schulman 1975], among them, and stones with amuletic power were prescribed for their manufacture [Pittman 1987:11].

As with beads, seals were often badges of status. In Ur, seals of lapis lazuli with banquet scenes were worn by members of the inner court, while those of shell with combat scenes were worn by functionaries who also dealt with the public [Rathje 1977]. Some seals were given by the king as a mark of esteem [Franke 1977; Zettler 1977]. Seals were used as grave offerings; one several centuries old was buried with an eight year old girl at Haftavan Tepe, Iran [Burney 1970]; it clearly never functioned as her personal seal.



Yet if seals are beads, they are very special beads. The origins of many beads are difficult to ascertain, while most seals convey sufficient data to date or assign an origin. Parallel styles or manufacturing techniques can aid in identifying beads. Conversely, the increasingly sophisticated field of bead research has much to offer those who study seals.

This exhibit was mounted to encourage a productive symbiotic relationship between bead and seal scholars. Unlike other seal collections of comparable size, these specimens were not acquired primarily for artistic beauty but to assemble representative specimens. Most of them are common man's seals, and perhaps more representative of the universe of seals than most collections published elsewhere. Here we highlight the relationships between seals and beads, and suggest some potentially profitable lines of investigation.

The Center for Bead Research seal collection was acquired between 1975 and 1978 principally in Iran, and reflects this geographic origin, with a few from other areas for comparison. The catalogue is designed not only to list the seals in the collection but also place them in their historical context, while extracting as much data as possible about their functions.

We wish to acknowledge the help especially of Prudence O. Harper, Curator of Ancient Near Eastern Art at the Metropolitan Museum of Art, New York, and of Leonard Gorelick, an outstanding connoisseur and researcher of seals for years. Both have provided stimulating and provocative discussions and some of the relevant literature.

The illustrations for catalogue numbers 71 and 75 were drawn by Jacqui Steinberg, a Friends of the Center volunteer. The rest were drawn by the author, in the hopes that they convey at least something of the appearance of the seals.



## BACKGROUND:

## A FEW TECHNICAL NOTES ON SEALS

Seals bear at least one flat side on which is engraved symbols, pictures, or words. When this is pressed into clay or wax, or inked and put to paper, it leaves a mirror image, usually idiosyncratic enough to identify its owner. Seals performed many functions. They confirmed approval and served as notary marks, signatures, and letterheads. They closed containers, rooms, or even houses with a sealing that broke if anyone tampered with it.

Until the use of paper, seals were applied to clay. The earliest stamp seals were impressed into a ball of clay or into clay applied at the opening of a container. The cylinder seal, with its ability to impress a large area of clay easily, became popular as writing was introduced. Clay tablets were sometimes covered with impressions and then written upon, or a clay tablet might be enclosed in a clay envelope which was covered with sealings. Stamp seals regained popularity in the first millennium B.C. as papyrus replaced clay as a writing surface; seals then impressed small clay lumps attached to the papyrus. The Chinese invention of paper brought the use of inked seals and seals impressed into wax.

The earliest seals were made of various soft stones, shell, or bone. The common stone is often called "steatite" (soapstone; a form of talc), but not all seals so identified are truly steatite. A recent study of Mesopotamian seals from 2800 to 2100 B.C. in the British Museum shows that chlorite (26.9 %) and serpentine (25.1 %) were dominant, with steatite accounting for less than 0.5 % of the 483 seals tested [Bimson and Sax 1982].

In the next few centuries, the metal ores of hematite (54 %) and goethite (11 %), were the overwhelming favorites, with the quartz minerals accounting for only 9 % [Sax 1986]. Later, quartz minerals dominated. This pattern is reflected in the present collection, where the earliest carnelian seal is of Kassite date, but virtually all from Neo-Babylonian times onward are of hard stones. It may be that many collections overemphasize fine, hard stones and that softer materials were more widely used than has been suspected. As an example, at Ugarit faience seals were numerous, and their designs differed from those of hematite and other stone seals [Schaeffer-Forrer 1983:1, 73].

The increased use of hard stone is related to technological advances for working them. Soft stones could be drilled with wooden sticks and abrasives [Gorelick and Gwinnett 1978]. Later, quartz mineral drills bits, and later still sapphires [Thompson: 1936:133-4], and finally diamonds were used for engraving and perforating.

Along with the drill bits, other tools improved. Some of the early seals were bored by hand, though the bow drill was already in use. Engravings on the earliest seals were gouged with hand-held tools. More efficient cutting wheels, which leave a tell-tale thinly tapering line, were first used only for certain classes of seals [Nissen 1977:16].

In this catalogue dating follows the revised chronology of Mellaart [1979] as far as possible. Dimensions are given in centimeters: stamp seals in height, followed by length (axis of perforation), and width; cylinder seals by height and diameter; and bezels by length and width. All dimensions are those of the seals themselves.

## THE FUNCTIONS OF SEALS

The way seals functioned in society is of prime concern. Most seals can be identified by their function, and these were varied; a study of the changes in function help us understand more about past cultures.

It is possible that the earliest seals identified a group of people, such as a family, a guild, a temple, or some sort of corporate entity rather than individuals. The somewhat later geometric seals of the Jemdet Nasr period [Nissen 1977:20], and perhaps some Sasanian seals with a distinctive device [Bivar 1969:28] may also have been corporately owned.

The change from the early form of stamp seals to cylinder seals has been explained in several ways. Porada suggested that cylinder seals may have been made by the people who cut stone vessels, using cores from the vessels for the seal [1977]. Nissen opined that it indicates a more complex society requiring more control and more variability in the seals, because cylinder seals could hold more complex designs than stamp seals [1977:15-6]. These explanations, however, fail to account for the early abandonment of cylinder seals in Egypt or the later return to stamp seals in Mesopotamia and Persia.

In Mesopotamia the two basic uses of seals were to close a container (a jar, a bag, a bundle, a library when the master was gone, even a house) by positioning a piece of clay (called a bulla) in a place where it would break if tampered with, and sealing the bulla [see Pittman 1987:13]. This may be less secure than lock and key, but custom (and perhaps superstition?) seems to have rendered the system effective.

The other use of seals was to legalize a clay tablet document (also called a bulla), which did not effect action as ours do, but ratified it. The most common documents were receipts, followed by relinquishments, and then those with various bureaucratic functions. The seals used were most often those of the person giving up a claim (for example by selling), but witnesses also affixed their seals. If someone did not own a seal a temporary one (called a *brugul* seal after the maker) usually of clay was made, the fashioner often attesting that he had made a seal for someone. Alternately, one could press the hem of his garment or his fingernail into the clay, and small stamps imitating fingernails are known. At first, these bullae were placed in clay envelopes which were also sealed; later two identical documents were made both of them being sealed [Steinkeller 1977:42-6; Renger 1977:75-7].

Apparently anyone could own a seal, although it was very rare for women to do so, but sometimes slaves did. Seals were often passed from father to son or brother to brother, and were re-engraved or retained the old inscription. When a person's status changed, by promotion or to proclaim fealty to a new king, seals were often re-engraved. Some merchants had more than one seal. The loss of a seal caused concern, and proclamations were issued voiding its use after that date. All Mesopotamian cylinder seals (except perhaps the early geometric ones) were those of individuals, except for one of the god Assur, used by the temple scribes [Zettler 1977:46-9; Renger 1977].

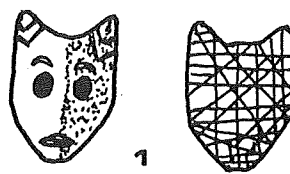
## THE EARLIEST CIVILIZATIONS

The story of seals is intimately linked to the development of civilization. Civilization (from "civitas" or city) implies an urban population supported by agriculture efficient enough to produce a surplus. This gives rise to the stratification of classes, bureaucracy, leisure time for the upper classes, and specialized artisans and clerks. The birth of such a society first took place in the Near East.

The first cities were little more than large villages with enough surplus to support worship centers and a few artisans. Jericho and Beidha in the Jordan Valley and Çatal Hüyük and Haçilar on the Anatolian plain represent the initial tentative development of cities. It is not clear if seals were in use in these places; some clay seal-like objects found there could have been used to print designs on cloth [Mellaart 1967:220; Buchanan 1967:266]. The earliest known seal was found at Hassuna in Mesopotamia.

But during the next step on the road to civilization, the development of a regional cultural sphere, seals became important. The people who formed the Halaf culture in the late 6th millennium came from outside Mesopotamia (the region between the Tigris and Euphrates, modern Iraq and parts of Turkey and Syria) and spread their influence in many directions. They made advances in techniques of agriculture, hunting, architecture, art, and ceramics, and established a wide trade network to bring obsidian from Anatolia, sea shells from the Indian Ocean, and gold, silver, copper, and bitumen from various sources. Was it the necessity of the business world or the desire to assert individuality in an increasingly complex society that fostered the growth of seals? The early seals were amuletic as well as functional; many are looped pendants or figures of houses, animals, or phalli. Each bears a distinctive engraving to identify a person, family or group, and clay sealings have been found with these impressions.

## Halaf Period Stamp Seal



1. Animal face stamp seal of black steatite or chlorite. 0.84 x 1.86 x 1.25.

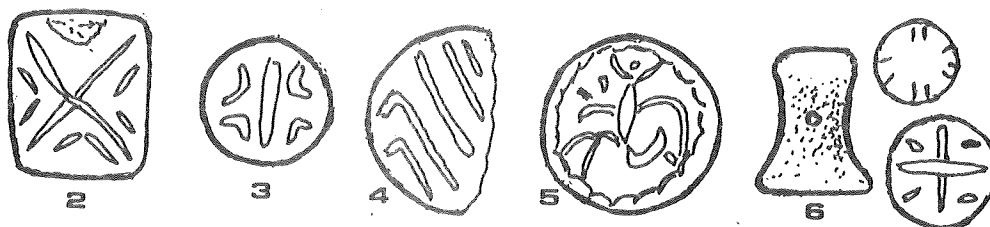
This seal has a peaked back decorated as the head of a dog or wolf, with the perforation apertures serving as the eyes. The face of the seal has thin lines in three axes in a web pattern. The seal's outline recalls the "gable seals," which first appear in Northern Syria around 3500 to 3100 B.C. [Braidwood and Braidwood 1960:3; Porada 1980:188]. The perforation, however, is different, and the sealing surface is typical of earlier Halaf designs [Braidwood and Braidwood 1960:63; Tobler 1950:179]. Although not strict parallels, a bull's head from early Halaf levels [Mallowan and Rose 1937:96] and a hedgehog [Pittman 1987:49] resemble this specimen.

## CITY STATES OF MESOPOTAMIA

In southern Mesopotamia, another newly arrived people, the Sumarians, built and rebuilt cities and temples, each one more complex than the last. They extended their interests northward, and about 4400 B.C. broke the power of Halaf, destroying some of its village-cities, and exceeding the influence of the older Halafian culture. The Sumarians were unsurpassed culturally, but politically were a mere collection of cities, each one a small state which struggled with its neighbors for supremacy.

The first seals of the area resembled those of Halaf, but in time motifs were borrowed freely from the less civilized tribes living along what is now the Iran-Iraq border. This fertile mountain region produced new designs of strong patterns which appealed to Sumerian tastes and were adapted for their seals. These flat circular or rectangular stamp seals were engraved with powerful representations of animals or humans or bold geometric patterns. Here was the first hint of the artistic wealth and strong design sense of the "barbarians," who lived in villages at the edge of world civilization.

## Flat Stamp Seals of Western Iran, 4th Millennium



2. Rectangular flat stamp seal of black steatite with an X design filled in with chevrons. 0.64 x 2.20 x 1.89.

3. Round disc stamp seal of white stone with a design of a single stroke with two chevrons on each side. 0.83 x 1.80 x 1.83.

The design of No. 2 (3 is a variant) is widely reported [Noveck 1975:20; Buchanan 1967:pl. I.3; Porada 1981:190; Braidwood and Braidwood 1960:figs. 191, 253, 380]. In the Amuq Plain it is dated to the Uruk Period, but it is probably older than that in Iran.

4. Domed stamp seal of chlorite or steatite with a design of a series of inter-resting zig-zags. 1.01 x 2.70 x 2.40 (broken).

This design is also widespread [Noveck 1975:21; Braidwood and Braidwood 1960:fig. 191], and also dated to the Uruk Period in Syria, but likely older in Iran.

5. Round slightly domed stamp seal of black steatite with a scorpion? in simple linear style, surrounded by a beaded line at the circumference. 1.0 x 2.2 x 2.2.

The linear stick figure type of engraving is found in Halaf-'Ubiad levels at Tepe Gawra [Buchanan 1967:28] and at Uruk levels in the Amuq sequence [Braidwood and Braidwood 1960:fig. 253]. The scorpion was a popular design element at Gawra [Tobler 1950:figs. 181-4].

6. Hammer-head stamp seal of agate with cross and four dashes on one end and radiating dashes on the other 2.0 x 1.5 (large end) x 1.2 (small end).

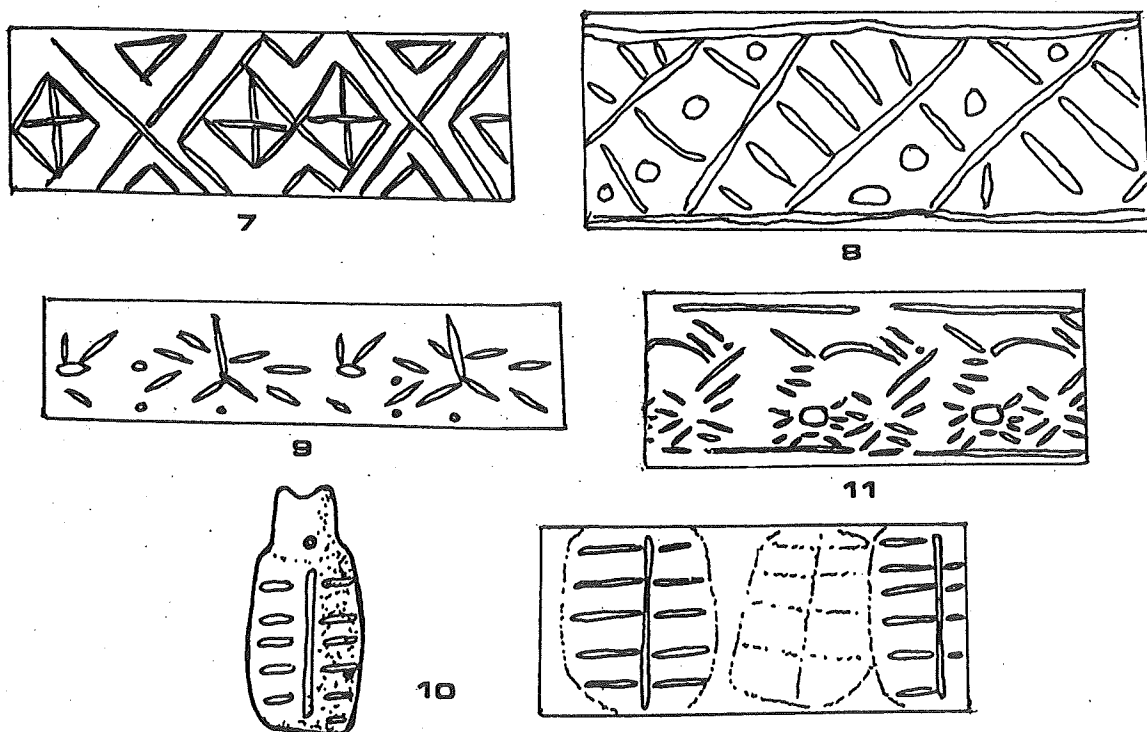
This shape has been called "reel" [Buchanan and Moorey 1984:xv]. It is an unusual form related to disc stamp seals. The simple design suggests an early date, though the material suggests a later date.

## THE DEVELOPMENT OF WRITING

Writing is the hallmark of civilization; all civilizations developed writing from the necessity for keeping track of the increasingly complex affairs of state, business, and religion. At first writing was the impressing of simple pictographs into clay. This evolved into more abstract cuneiform (wedge-shaped) designs representing syllables and words. The invention of writing was one of the greatest gifts the Sumarians gave the world, and consolidated the hold their learning and culture had over the Middle East for millennia.

The cylinder seal was introduced with writing, and it quickly became the dominant form in Mesopotamia and elsewhere. Cylinders have the advantage of making a continuous design to cover a large area with ease. They also allow for more design variety, and more and more elaborate scenes became popular. The cylinders maintained supremacy in Mesopotamia for 2000 years. At the frontiers variations were soon being used, such as the solid cylinder with a loop at the top.

## Cylinder Seals of the Jemdet Nasr Period (3400 - 3100 B.C.)



7. White chalky stone with designs of double diamonds, each filled with a cross and surrounded by diamond frames. 2.4 x 1.2.

A somewhat similar pattern is found in Buchanan [1966:14 #58].

8. Black steatite or chlorite with design of ladders alternating with ladders with drillings. 3.3 x 2.4.

Similar designs are found in Porada and Buchanan [1948:7 #35].

9. Black steatite with an apparently meaningless design of angular lines and drillings. 1.9 x 1.0.

Buchanan [1966:15 #65] shows a similar cylinder without the drillings.

10. White limestone? looped cylinder seal with a design of horizontal lines crossed with a few vertical stripes. 3.2 x 1.3.

A number of parallels exist, all ascribed to peripheral regions (usually Syria) during the Jemdet Nasr Phase [Frankfort 1937:VI.e. XXXVIII; Braidwood and Braidwood 1960:332.1; Buchanan 1966:135-6 #742]. The perforation may have been broken on top and redrilled with a fine drill.

11. Faience without its glaze with short incisions making a fish or insect design. 0.9 x 2.1.

A popular motif in Jemdet Nasr times, although the exact nature of the repeating design is not quite understood [Frankfort 1939:VIIIa; Porada and Buchanan 1948:#30; Amiet 1961:#346; Buchanan 1966:#30]

## EMPIRES AND THEIR EBB AND FLOW

The Sumarian civilization lasted for more than 2000 years until a Semetic-speaking people from the western borders successfully conquered Mesopotamia. Led by the brilliant Sargon (2445-2414), they built the first empire, ruling from the Persian Gulf to the Mediterranean Sea. Sargon opened trade much farther afield to Bahrain, Oman, and on to India.

The conquest worked two ways. Although the Semetic language, Akkadian, was spoken in the marketplace, Sumarian remained the medium of learning and the lingua franca of all educated people. For another 2000 years the arts and sciences flourished in Mesopotamia as nowhere else, and the accomplishments in architecture and the minor arts, medicine, geology, metallurgy, astronomy and mathematics enriched the world.

Cultural developments took place against a background of fickle political fortunes, invasions, and war. On the Iranian side, the Elamites built their first empire centered at Susa, near the Mesopotamian plain, stretching west to Afghanistan. They presented now a threat to, now an opportunity for the Mesopotamians. The Amorites moved into middle Mesopotamia, settling in the small town of Babylon, which shortly rose to greatness, giving the world the law-giver Hammurapi. Later the Kassites from the Zagros region of Iran, the Hittites of Anatolia, and the Arameans, centered in Syria, all had their brief periods of glory.

The Assyrians living in the northern reaches of the Tigris had established trading colonies in central Anatolia. Sargon, then the Mittanis conquered them. Urartu, safe in its mountain fastness around Lake Van, plagued them, and they were continually settling scores with the Hittites and, above all, their great rival Babylon. The Assyrians' diplomatic and military skills always allowed them to recover, and by 1100 B.C. they took Babylon. For 600 years power shifted between Babylon and Assyria's capital, Nineveh, until the Chaldeans took first Babylon and then Nineveh. Now Babylon was supreme, but not for long. Yet another new people, the Aryan speaking Persians, ended the ancient cycle of war and conquest.

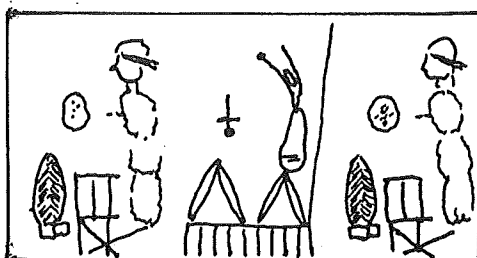
Many of these people still live among us. Iraq now speaks Semetic Arabic rather than Akkadian. The Arameans are ancestor to the Syrians (the similar sound of "Assyria" and "Syria" is accidental), and Persia is now Iran. The Elamites, Kassites, Mittanis, and the powerful Hittites were absorbed by newly vigorous people.

Moreover, these people live in our collective memories. Abraham came from Ur, which succeeded Uruk as the chief pre-Sargonid city. Esau's two wives were Hittites, and Solomon bought horses from these people. Aram was one of

Noah's grandsons, Aramea a powerful neighbor of Israel, parts of the Old Testament was written in their language, and Jesus spoke an Aramean dialect. The Assyrians invaded Samaria and Judea. Daniel was imprisoned in Babylon, by the waters of which the children of Israel wept. Cyrus the Persian freed them and his son Xerxes loved Esther.

Babylonian and Assyrian seals were nearly all cylinders, few of which are represented here. Our collection is more representative of the peoples and cultures which vied for dominance in this long period.

#### Cylinder Seals of Mesopotamia



12

12. Cylinder seal of soft white stone, very worn. 3.4 x 1.3.

What is left of the design shows two facing figures, one with arms raised above his head and the other with a dagger. The field is filled with characters or objects, one of which appears to be a fire. The design is badly worn, and no precise parallels can be drawn. However, in style the seal resembles common ones of the Old Babylonian or Amorite Period ca. 2143-1738 B.C., with two or three rigid, formal subjects with little modeling, and fields crowded with symbolic devices bearing no relationship to the central design [Buchanan 1966:83].

13. Carnelian cylinder seal with long prayer inscription 2.2 x 1.6.

A worn but typical Kassite seal with prayer inscription [Frankfort 1938:XXX j-m, p; Buchanan 1966:101; Noveck 1975:47; Porada 1981:282]. The function of these prayer seals may have been essentially amuletic [Evans 1922:14], which may account for the shallow engraving and the eccentricity of the seal's cross section.

#### Stamp Seals of Other Regions

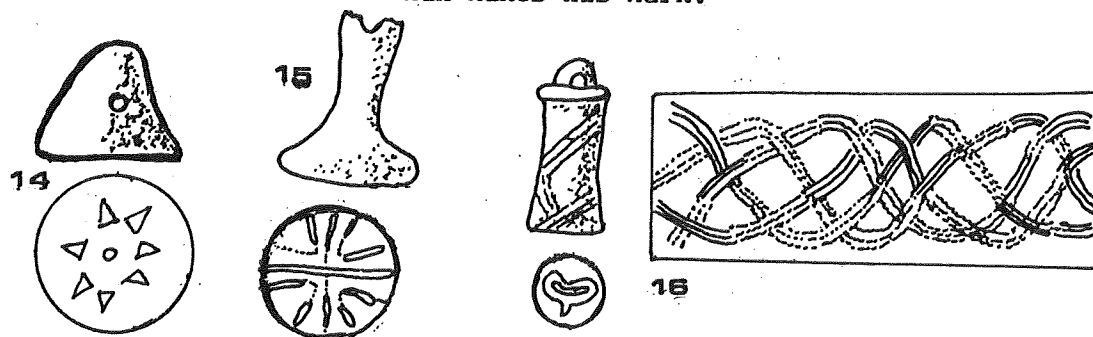
14. Conical faience seal with sunburst design 1.5 x 2.0 x 1.9.

A seal of similar material and shape with a winged disc design was excavated from Burnt Building II at Hasanlu, Iran, destroyed ca. 800 B.C. [University Museum, Philadelphia]. Hasanlu was a fortress of an unidentified culture, but probably allied to Assyria and destroyed by Urartu.

15. Handled stamp seal of bronze with geometric compartmentalized design 2.3 x 1.4 x 1.9.

Cast bronze seals were a speciality of Anatolia [Ozguç 1959], and this shape recalls one such seal [Ibid.:pl. IV c]. Similar seals have been found west of Anatolia [Buchanan 1967:273; Noveck 1975:24], dating to ca. 2500 B.C. This seal, however, was bought in Afghanistan and may be a later Central Asian type.





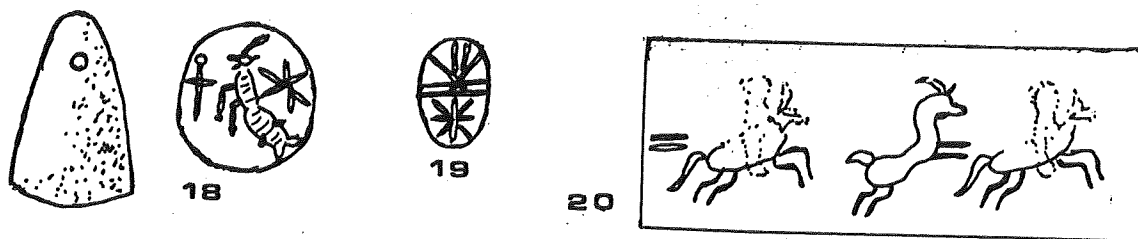
16. Looped cylinder and stamp seal of steatite with an intertwined snake design 2.4 x 1.0.

The looped cylinder seal with a stamp on the bottom is known from ca. 1700 B.C. in central Asia [Kohl 1984], and in Urartu (modern Armenia) from ca. 800 B.C. [Kliess:1971]. The intertwined serpent design is a common Middle Eastern motif, as early as the Jemdet Nasr period and especially popular with the Mitanni [Amiet 1961:134-5; Buchanan 1966:9, pl. 57].

17. Mushroom-shaped handled stamp seal of steatite with a stage and in the field two dashes and a tri-pronged figure. 1.5 x 2.8.

No precise parallel for this seal has been seen, but it appears most likely to be Neo-Hittite of northern Syria, 10th to 8th century. Both the shape and some design elements suggest this [Porada 1981:192-3, 204].

#### Neo-Babylonian and Neo-Elamite Seals



18. Stamp seal of pyramid or sliced almond shape of chalcedony with a slightly convex sealing area with a fish-goat, a cross and ball and a star 2.5 x 1.9 x 1.7.

The subject is a mythological creature associated with the water god Ea. The cross surmounted by a ball is possibly a "star scepter," and the star perhaps Venus. Neo-Babylonian ca. 600-400 B.C. Similar fish-goat seals are to be seen in Forte [1976:41] and Porada and Buchanan [1948:99 #803].

19. Stamp seal of pyramid or sliced almond shape of chalcedony with a slightly convex sealing area with an eight rayed star above two horizontal lines and four lines fanning out from these below 1.7 x 1.5 x 1.1.

A similar motif is on the bottom of a marble duck weight thought to be Assyrian or Neo-Babylonian [Von der Osten and Henning 1934:XXII 510].

The shape of the seal classifies it as Neo-Babylonian ca. 600-400 B.C.

20. Cylinder seal of faience with a mounted hunter pursuing a deer 2.1 x 1.1.

The style was popular in the Neo-Elamite and Proto-Achaemenid Periods. The hunter is obscured, but his horse lacks the looped tail of Achaemenid iconography, and the seal probably belongs to the earlier period [Porada and Buchanan 1948:102; Noveck 1975:56].

## THE PERSIAN EMPIRES

The center of power now shifts from Mesopotamia to the foothills and plains of Iran. Elam, Assyria, and Babylon were all swept away by the irresistible force of the Achaemenid kings, who possessed considerable talent and wealth and overriding ambition. The Bible says their empire spanned "from India to Ethiopia, over one hundred and twenty-five provinces" [Esther 1:1]. Darius dug the first Suez Canal. The Greek historian, Herodotus, described Xerxes' postal carriers as, "stayed neither by snow nor rain nor heat nor darkness from accomplishing their appointed course with all speed" [Frye 1962:110]. It was a glorious age.

But a Macedonian teenager brought it all to doom, wresting the jewel of Persia and reducing the capital Persepolis to ashes. Alexander's conquests mark the end of the ancient world. His enormous empire was divided between squabbling successors, whose weakness was soon exploited by the Parthians, a Scythian tribe. Though they ruled Persia longer than any other dynasty, the Parthians were not liked. They were foreigners and looked abroad for their inspiration, even going as far as putting "Philhellenes" (lovers of Greece) on their coins.

Taking advantage of the chaos of a weak dynasty, an indigenous one arose. The Sasanians ushered in the brightest period Persia has ever enjoyed, as rivals of Rome and masters of the West. Sitting aside the Silk Route, they directed trade to the far corners of the world. Persia's artistic and cultural influence can be traced from Spain to China.

The Achaemenid seals were mostly Mesopotamian-derived cylinders; those of the Parthians are hardly known. But those of the Sasanians are endowed with a vigor and beauty that make them outstanding examples of the glyptic art. The Sasanians returned to the stamp seal, so long eclipsed, and made an indelible mark on history.

## SASANIAN STAMP SEALS

Because Sasanian seals make up the largest group in this collection, a few prefatory remarks about them are appropriate. These seals may be classified in two ways. One is the arbitrary but logical order first used by Thomas in 1852 with designs as the criteria. No one has done better since, and the order is still followed [Bivar 1969:3]. The other method is to arrange the seals according to shape, which may offer chronological clues [Ibid.:20-4]. This has not been entirely worked out, and though we use the dating derived from it, we shall arrange these seals in the traditional manner.

Most Sasanian seals are large and were probably worn as pendants. One example of a bezel seal is in the collection, and an uninscribed stone ring is also included. The smaller seals were likely worn as finger rings.

Many of these designs are those of animals, such as scorpions, bulls, and rams. Another common design is Gayomard, the primal man. The designs often correspond to stellar constellations: many animals to zodiacal groups, and Gayomard to Orion, complete with a canine companion. This interpretation, first stressed by Ackerman [1938], deserves more attention [Bivar 1969:26], but Brunner [1978:11] argues that design sources are wider than this alone.

The imposing, naked, hairy man, usually with outstretched arms holding two staffs and a dog running alongside is on many seals, and is commonly called Gayomard, though Bivar says this is mere convenience [1969:26] and Brunner

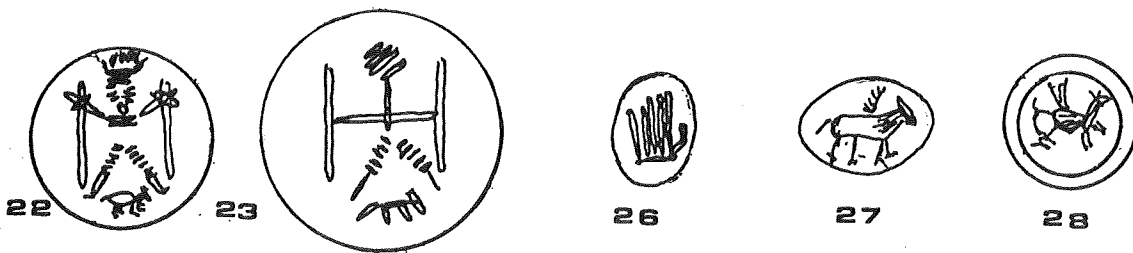
stresses its uncertainty [1978:68]. However, the iconography is convincing. Gayomard was the first hominoid, the sixth creation of Ormazd. The evil one, Ahreman, slew Gayomard, whose flesh and bones became the metals of the Earth and whose semen gave rise to the first human couple (underscoring the prominence often given his phallus on many seals). Gayomard was accompanied by Yellow Ears, the primal dog, who guarded him over the Bridge of Separation from the many spirits who haunted the dead.

There are several types of Gayomard seals, the most common standing full-face like Orion. Some are distinctive by being very large, poorly executed, and shallowly cut. They do not seem to be simply worn down. They are never found as sealings and might be amulets [Harper 1973], perhaps burial amulets -- who better to accompany one to the other world than stout Gayomard and faithful Yellow Ears? [Francis 1988:69]

Another notable design is the "heraldic device," a linear figure whose top section with a crescent and two arms below is invariable and bottom section never seems to be repeated. The design is strictly Sasanian, though it has its counterparts in Pakistan/western India, where at least some are royal and were used on coins; they appear there in Saka-Parthian and Kushan times, contemporary with the Parthians and Sasanians in Iran [Allchin 1979:757-61]. Though their modern use on peasant houses may simply be as charms [Porada 1962:222], they were clearly more important in the past. Ghirshman believed that the top part symbolized "Iran," with the bottom indicating a family [1975:189, 244]. Bivar noted that they may have developed from cattle brands and that only a few are actual monograms; he suggested they may belong to specific fire altar temples [1969:27-9].

Also notable are flowers, especially the tulip, reminding us that Iran is the home of the tulip, as well as the rose and iris. There are mythological animals: the griffin imported from the west, but associated with the Persian simorgh [Brunner 1957:81], and the sphinx, borrowed from Egypt. The fire altar was central to the Zoroastrian religion. Crosses appear on Sasanian seals, and it appears that they were once owned by Christians [Lerner 1977].

#### Sasanian Stamp Seals



21. Gayomard in side view on ellipsoid seal of carnelian. 0.9 x 1.2. Fourth century A.D. (Bivar group BE).
22. Full figured Gayomard on dome seal of brownish chalcedony. 1.8 x 2.2 x 2.3. (Bivar group BF).
23. Full figured Gayomard on domed seal of onyx, with curved stamping area and very shallow inscription. 2.3 x 2.8 x 3.1. Possibly a burial amulet. (Bivar group BF).

24. Full figured Gayomard on flattened dome seal of light chalcedony with slightly curved sealing area and shallow engraving. 1.3 x 2.6 x 2.2.

Possibly a burial amulet. It has been surface altered, perhaps through contact with soda, whitening the surface. This can happen in burial.

Shape not listed in Bivar. (Bivar group BF).

25. Head of Gayomard, full face, surrounded by beaded frame on slightly flattened dome seal, apparently of speculum (bronze with a heavy amount of tin). 0.8 x 1.2 x 1.3.

Not listed in Bivar, nor in Brunner [1975].

26. Hand on ellipsoid seal of brown chalcedony. 1.7 x 1.4 x 2.4.

(Bivar group CI). This is a very crude representation, merely scratched in and with five fingers and a thumb. It is unlike the usual hand in which the thumb and forefinger touch. A similar hand is found in Brunner [1978:122]. It might be thought a forgery, but the engraving is gouged, not done with a wheel. It may have also been recut in Muslim times, as an open hand is a common Muslim motif.

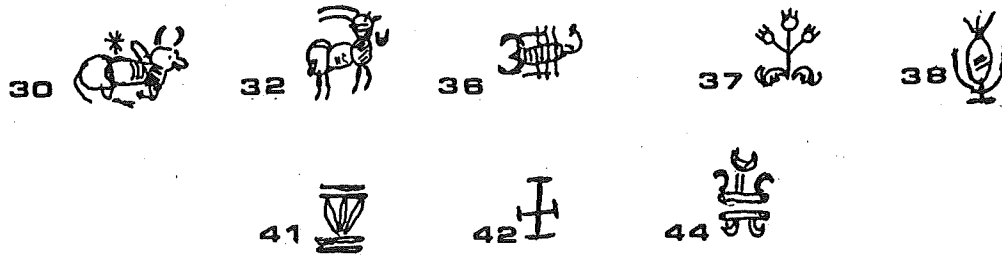
27. Griffin on ring bezel of carnelian set into silver ring of modern make. 1.3 x 1.1.

Third to fourth century A.D. (Bivar group EG; ring bezel A).

28. Griffin with leafy frame on dome seal of carnelian (Bivar group EG). 1.1 x 1.5 x 1.5.

29. Sphinx on dome seal of carnelian. 0.8 x 0.9 x 1.1.

Probably small enough for a ring. (Bivar group EH).



30. Zebu (hump-backed bull) with star in the field on ellipsoid of white chalcedony. 1.9 x 1.3 x 2.8.

Fourth century A.D. (Bivar group EN).

31. Zebu, crouching, on slightly flattened dome seal of carnelian. 0.7 x 1.2 x 1.2.

Small and flat enough to wear as a ring. (Bivar group EN).

32. Ram with crescent in field on ellipsoid of white chalcedony. 1.7 x 1.5 x 2.0.

Fourth century A.D. (Bivar group EQ).

33. Crouching stag on ellipsoid of brown-grey chalcedony. 1.0 x 0.7 x 1.1(broken).

Fourth century A.D. (Bivar group FB).

34. Walking duck on ellipsoid seal of onyx. 0.7 x 0.7 x 0.8.

A very small seal, no doubt for a ring. Fourth century A.D. (Bivar group HC).

35. Scorpion on ellipsoid seal of quartz crystal. 1.5 x 1.3 x 0.9.

Fourth century A.D. (Bivar group KA).

36. Scorpion on agate seal of cylindrical form with rounded ends and one side cut to provide a sealing surface. 1.3 x 1.4 x 1.5.

(Bivar group KA). The shape is unusual, but one in Bivar has a stag (FB 10, p. 144).

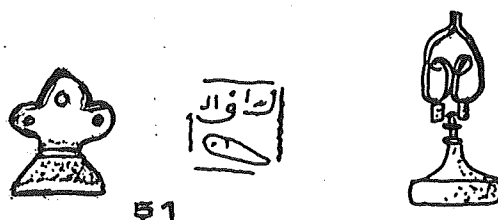
37. Pomegranate flower with leaves on dome seal of quartz crystal. 1.2 x 1.3 x 1.5.  
 (Bivar group LA). Harper [1973:80] convincingly identifies the flower as a pomegranate.
38. Tulip on ellipsoid seal of carnelian. 1.3 x 1.1 x 1.8.  
 Fourth century A.D. (Bivar group LB).
39. Tulip on ellipsoid seal of white chalcedony. 1.5 x 1.0 x 1.8.  
 Fourth century A.D. (Bivar group LB).
40. Tulip on ellipsoid seal of carnelian. 1.3 x 1.0 x 1.5.  
 Fourth century A.D. (Bivar group LB).
41. Crude fire alter on ellipsoid seal of grey-brown chalcedony. 1.3 x 1.0 x 1.6.  
 Fourth century A.D. (Bivar group LG; see LG 3).
42. Cross on elliptical seal of carnelian. 1.1 x 0.7 x 1.3.  
 Fourth century A.D. (Bivar group NA).
43. Device on dome seal of carnelian. This device has a crescent above, down-turned arms in the center and an upside down crescent below. The crescents have short dashes in them. 0.8 x 0.8(broken) x 1.1  
 Small enough to be worn on a ring. (Bivar group NC; see NC 1).
44. Device on dome seal of soda-altered carnelian? The device has a crescent above with an inverted letter "pi" in the center and the letter "pi" below. (Bivar group NI). 1.1 x 1.2 x 1.3.
45. Eight pointed star surrounded by thick frame of diagonal lines on dome seal of carnelian. Not listed in Bivar. 1.0 x 1.0 x 1.2.
46. Eight pointed star atop two horizontal lines on ellipsoid seal of carnelian. Fourth century A.D. Not listed in Bivar. 1.5 x 1.2 x 1.8.
47. Worn design of uncertain pattern within beaded frame on dome seal of hematite. 1.1 x 1.6 x 1.5.  
 Fifth to sixth century A.D. The design left has two prominent crescents facing each other and a few dashes in the center. It might possibly be a scorpion.
48. Ungraved carnelian ring with flat area. 2.6 x 0.5.  
 Fourth to fifth century A.D. Thinner than the types shown by Bivar.

#### T H E   M U S L I M   I N V A S I O N

If in 323 B.C. Alexander put an end to the ancient world, it happened all over again in 709 A.D. This time it was not an impetuous youth building an empire, but an army of the devout conquering in the name of God. The tide of Islamic belief that began in 622 when Mohammed was forced to flee Mecca swept much of the world in barely two generations. By 710 the Muslim armies were in Sind (Pakistan), and the next year in Spain. Persia was swept along too, and nothing would ever be the same for this ancient land.

The seals reflected the change immediately. Gone were any human or even animal figures, with few exceptions. The human image was forbidden, as were any others linked to the superstitious past. In their place was the glory of Arabic calligraphy. Gone, too, was the ostentation of elaborate jewelry. Seals were now purely functional and took only two forms, as rings for the finger or as bezels held in silver handles, which were sometimes joined with chains; they could hardly be mistaken for anything frivolous. Another major transformation took place: seals were no longer made to impress in clay, but were now used with wax or ink on paper.

## Muslim Seals of Iran



Typical  
Silver  
Handled  
Seal

49. The name of God "Allah" on a low dome Sasanian-type seal of green jasper. 0.7 x 1.1 x 1.2.

This is not a seal, but an amulet, made most likely at the interface between the Sasanian and Muslim periods. The shape of the body in jasper is the type used in late Sasanian times [Bivar 1969:24]. The original seal was ground off (there remains an area below the inscription that was too deep to grind away). It was then re-engraved with the word "Allah," which reads positively (from right to left), showing that it was used as an amulet.

50. The name Mohammed surrounded by a short text in Kufic script, on an ellipsoid carnelian bezel set into a silver handle. 2.2 x 1.1.

The inscription has given every educated Arab to whom I showed it problems. The best guess is that it says, "Allikum auf Fusakum" or "Search for/pardon yourself." The use of Kufic, a squarish Arab script, helps date the seal, as Kufic was abandoned by the twelfth century.

51. The inscription "Lot'f-Allah" (Kindness of God) over a fish on a handled serpentine? seal. 1.6 x 1.4 x 1.3.

The fish might suggest a Christian connection, but the inscription is Muslim. Seals of similar shape and execution have been found at Fustat (Cairo) dated between the seventh to twelfth century.

52. The name Ali Maal (?) on an elliptical carnelian seal set in a silver handle. 1.7 x 1.2.

The name is difficult to read, as the calligraphy is in the style which was popular in the Ottoman Empire. It might be dated, as the numbers 138 could stand for 1138 A.H. = A.D. 1725/6.

53. The name Mohammed Hassan Abbas surrounded by flowers on a square carnelian bezel set into a silver handle. 1.5 x 1.2.

Abbas is a common Persian surname. The seal is dated 1281 = 1864.

54. The inscription "Mohammed dost Abd" (Mohammed, friend of Abdel) or the name Mohammed Said Abd on a pointed ovate shaped seal of lapis lazuli with thin floral designs in the field, mounted on a silver handle. 1.8 x 1.4.

The shape is common for silver amulets in the Muslim world, and may be related to the cyprus motif, which became popular in Iran at the beginning of the Safavid dynasty (1502-1722) [Corrie 1975]. It is dated 1284 = 1867.

55. The name Abdel Hassan Ali (can be read either way) surrounded by floral motifs on an elliptical carnelian set in a silver handle. 1.6 x 1.1.

The seal is dated A.H. 1314 = A.D. 1896.

56. The name Mansoor Al-Musawi surrounded by thick floral motifs on a square carnelian bezel set into a silver ring. 1.9 x 1.6.

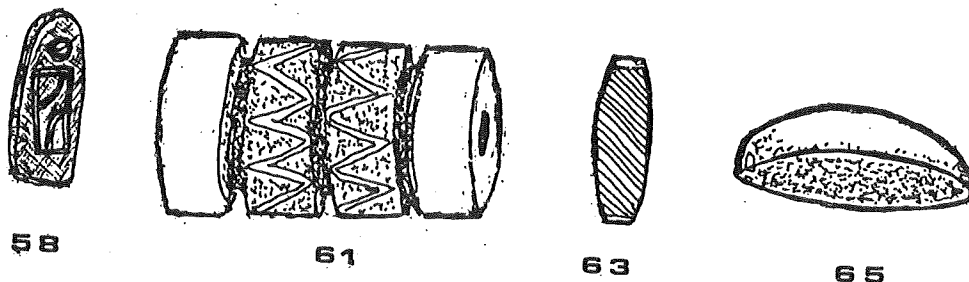
The seal is dated A.H. 1318 = A.D. 1899.

57. A seal with two different sealing surfaces held in a small perforated gold frame. One side is a small elliptical bloodstone engraved with the name Makro Aj Ben Yahya (Aj = Mister). The other side has a small elliptical sardonyx engraved in Armenian, presumably with the same name. 1.0 x 1.3 x 0.8.

The seal was no doubt made for an Armenian Christian. It was bought in Isfahan, which has had a large Armenian community (Julfa), since the group was settled there from the border region by Shah Abbas in the early sixteenth century.

#### SEALS, BEADS, OR WHAT?

This section deals with objects which are either seal-like or have at times been regarded as seals. It demonstrates an ambiguous area between these two classes of objects, and is designed to show the close relationship between beads and seals.



#### Prehistoric Pendant Amulet

58. Rectangular piece of black steatite, pierced through the face, with engraved designs on one face. 1.0 x 0.6 x 2.6.

Similar pendants are found at a number of early Middle Eastern sites. The earliest ones are engraved with criss-cross lines similar to Halafian seals (see catalogue entry no. 1) [Mallowan and Rose 1935:figs. 50-1], while later ones are engraved with more substantial lines. Thus, the engraving on these objects follows the development of seal engraving. Such an object would be very difficult to use as a seal, and should be considered an amulet. Close parallels are found at Tepe Gawra from the 4th through the mid-3rd millennium [Tobler 1950:144-5, fig. 31b].

#### Clay Rollers, Ban Chiang, Thailand

59. Baked terracotta cylinder carved into a relief design with two flat ends and three waves between them. 2.3 x 4.4.

60. Baked terracotta cylinder carved into a relief design with eight straight lines. 2.2 x 6.14.

61. Baked terracotta cylinder carved into a relief design with two flat ends and two zig-zag lines between them. 2.9 x 4.8.

These objects come from the site of Ban Chiang, Thailand (or related sites) and are dated ca. 500 to 200 B.C. They are often found in burials and often have red ocher in the deeply cut designs. It was first assumed that they were for printing on textiles [see Francis 1985:44], in the

manner of similar clay objects from the early Middle East, which may have served this purpose or have been seals (see introduction). The most recent theory is that they were amulets for children, as nothing has been found which they might have decorated [Folan and Hyde 1983].

#### Faience Beads or Seals

62. White faience cylinder with no traces of glaze and miscellaneous incised lines. 1.2 x 2.3.

63. Bluish faience long barrel with parallel diagonal incised lines. 1.0 x 2.3.

These are common in the Middle East from about 3400 B.C. until 1000 B.C. or later. There is no agreement on whether they are beads or seals, but it seems more likely that they are beads. Certainly the shape of # 63 would be more suited to a bead than a seal. Parallels are found in Buchanan [1966:10, 15-6], though his dating of these down to the modern period is much too recent, and at Alisar Huyuk in the Old Hittite Period and afterwards, ca. 2000 to 1000 B.C. [von der Osten 1937:284, 450].

#### Flat Stone Beads or Seals

64. Serpentine flattened oblate with crude panels cut into its sides. 2.4 x 2.3.

65. Onyx flattened long barrel. 1.9 x 4.5.

66. Green jasper flattened oblate. 2.1 x 1.9.

67. Quartz (rock) crystal flattened oblate. 1.7 x 1.7.

These objects share the characteristic of having one flattened side. Rivett-Carnac [1900:10] discussed large oval agate and onyx beads with one flattened side which she said were called "Khas muhr" or "Jehur muhr" in India. They were lent out by fakirs (never for money) in cases of child birth, poisoning, or disease. She thought the flattening might be due to rubbing the beads against the body, but this seems quite unlikely.

Catalogue # 65 seems to match her description. On the other hand, the other objects in this class are more possibly blanks for making seals. The incised panels in the sides of # 64 is a well-known Sasanian motif, though the material and the crudeness of the work do not match Sasanian standards. The other two objects could possibly be seal blanks or seals which were ground down after the Muslim invasion. Their flat sides do suggest that they may have been reground.

#### Gaming Piece or Seal Blank

68. Grey chalcedony pointed domed piece without perforation. 2.1 x 2.0.

This object looks as though it could be a blank for a seal, but the weight of opinion is against that. The shape of the stone matches that of glass gaming piece known from other Middle Eastern contexts [Jenkins 1986:52]. Brunner [1978:46, n. 6] is of the opinion that a similar object in the Metropolitan Museum of Art is a gaming piece, especially since it rises to a point (as does # 68), a shape not known for seals.



## SEALS FROM ELSEWHERE

Seals are not the exclusive preserve of the ancient Middle East. They were once widely used, and in each region attained an individuality of their own. The Center for Bead Research collection has only a few examples of other types of seals, all of them are modern or suspected to be modern. They are included here for comparative purposes and to illustrate the wide variety of seals in other areas of the world.



69



71



75

Egyptian Scarabs

69. Steatite scarab, slightly brownish in color, perforated. 0.9 x 0.6 x 1.5.

70. Steatite scarab, slightly bluish in color, not perforated through. 1.0 x 0.7 x 1.5.

The Mesopotamians introduced the cylinder seal to Egypt before the first dynasty (ca. 3400 B.C.) and the idea was quickly adopted. However, it was not long (by ca. 2850 B.C.) that the Egyptians abandoned the cylinder seal in favor of the indigenous scarab seal. This seal is shaped like the scarab or dung beetle, an insect held sacred by the Egyptians, as it was believed that it moved the sun across the sky by day.

Scarab seals played many roles. They served as seals in the manner of others in this collection, but they also performed other functions. Many of them were given to friends as gifts, inscribed with writings or secret symbols vouching for their friendship or wishing them luck. Many were worn as amulets, often carrying the name of some famous great pharaoh of the past. Pharaohs would inscribe large ones and send them to the far corners of the empire to announce important happenings. [see Ward 1900, Newberry 1906].

Catalogue number 69 in this collection was given to the Center with the information that it had been in a trunk owned by a member of the household and not opened since about 1846. As this appears to be the case, it would suggest that the piece was ancient. In 1900 Fraser wrote, "Again it has often been said that [scarab] forgeries are very common, but more than two year's experience enables me to say that this is not so. Forgeries are rare for the simple reason that as a rule it would not pay people to make them. It is true that there are certain classes of imitation scarabs, but so unmistakable that usually not even tourists are taken in by them..." [Fraser 1900:v].

However, there is no question that it today greatly repays the makers of Gorna (across the Nile from Luxor) or even more so the unscrupulous dealers of Luxor or Cairo to have forgeries made. Catalogue number 70 was bought by this author in Gorna from Sidi Hassan, the maker, in 1978.

## Harappan Stamp Seals

Along the Indus River a civilization arose to rival those of Mesopotamia and Egypt. The Harappan or Indus Valley Civilization (ca. 2600 to 1700 B.C.) was the largest empire of the ancient world, with colonies from Afghanistan to central India. It was well organized: cities had perfectly straight streets and complex interconnected sewer systems. It was wealthy and powerful, and sold goods to Mesopotamia. Many details of the Harappans evade us; we have yet to learn to read their script, found almost entirely on the seals. They used steatite stamp seal blocks with small loop handles on back, the face coated with a steatite slip. The C.B.R. collection has no original seals, but a set of plaster casts made by the National Museum, Karachi, Pakistan and sold as souvenirs, and a unique set of three aluminum casts made in the same museum workshop, but not offered for public sale.

## 71. Aluminum cast of the "Lord of the Beasts" seal. 3.8 x 4.0.

This is one of the most significant Harappan seals. A man in a yoga position with his eyes closed in meditation is wearing a horned helmet and surrounded by four animals. He is Śiva Pushupati, the Hindu lord of animals, a link between the religion of the Harappans and later Hinduism.

72. Aluminum cast of a seal with a kneeling figure worshipping a goddess wearing bangles. Growing from her head is a sapling of a sacred fig or pipal (*Ficus religiosa*) tree. Behind is a bull and in front are seven dancing? women carrying what may be offering plates. 3.8 x 3.8.

Again, the iconography recalls many aspects of Hindu religion, including the offering plates, the bull, and the sacred fig tree.

## 73. Aluminum cast of a seal with a staff with necks and heads of two "unicorns" facing a bunch of leaves of the sacred fig. 3.8 x 3.9.

The unicorn is the most common Harappan seal motif, usually facing an object called an incense burner or a manger, but perhaps is a device to make the sacred drink, soma [Mahadevan 1983]. We do not know if unicorns were purposely depicted or if side views of a bull simply show one horn.

## 74. A set of plaster casts of Harappan seals.

These are mostly animals: the common unicorns, Zebu bulls, a composite animal with three heads, elephants, rhinoceroses, and water buffaloes.

## The Chinese Chop

The Chinese were much later in using seals than were Western civilizations. The earliest were of bronze in the Late Zhou period (ca. 473 to 256 B.C.), used on clay. When paper came into general use in the second century A.D. they were inked and stamped. They were first used principally by government officials; the Han court prescribed materials, colors, and handle styles for each rank of nobility and officer. The artist Wang Mien popularized soft stones seals to sign paintings in the 13th-14th century [Lai 1976:x-xi]. Most ancient Chinese seals had square faces and perforated handles. The style represented here, with a long unperforated handle, appears to have developed in the Qin dynasty in the last century and is now dominant.

## 75. A column handled "chop" of soft white stone surmounted by a dragon with square sealing face with the name Peter in Roman and Chinese characters. It is accompanied by a fancy presentation box of red ink. 7.7 x 1.8 x 1.9.

The seal was made for the author in Xian in 1986.

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