Beetles in Stone: The Egyptian Scarab

By William A. Ward

While a biologist may appreciate the beauty of the beetle's physical structure and the wonder and precision of its life cycle, to most of us the beetle is simply a pest, certainly not a creature to be endowed with awe and respect. The Egyptian attitude toward the beetle was quite the opposite of the attitudes of most people today.[1] The beetle is an extraordinarily common motif in Egyptian art, it was honored in religious thought, and the name of the beetle and its picture portrayed the idea "to come into existence" in the Egyptian language and script. The Egyptians honored the beetle because it represented something that was deeply meaningful within the framework of their beliefs about the universe. It spoke about the powers they believed controlled that universe, and reflected thoughts about the Egyptians themselves and their eternal existence.

Scarab Origins, Manufacture, and Use

Origins

Around 2500 BCE, a class of small stone design amulets began to appear in Egypt, found primarily with women and children buried in cemeteries of the ordinary people of Egypt. The earliest examples are shaped like a tiny pyramid and have geometric and animal designs engraved on the bottom surface. As time went by, the shape of these objects changed into circular bases with a pierced knob on the back, the form which caused early archaeologists to call these objects "button seals." Shortly after this, design amulets began evolving into objects that retained the circular or oval base, but were now carved with backs in the form of animal or human heads, or whole animal or human figures.[2]

One of these animals was the beetle. Within a very short time, the beetle be-

The male beetle makes a ball of dung to be buried just under the surface and used later as a food supply. To roll this food supply to where it will be buried, the beetle balances on its rear legs, using the front and middle pair to push the ball. *Photograph by S. I. Bishara. From Ward 1978:101.*

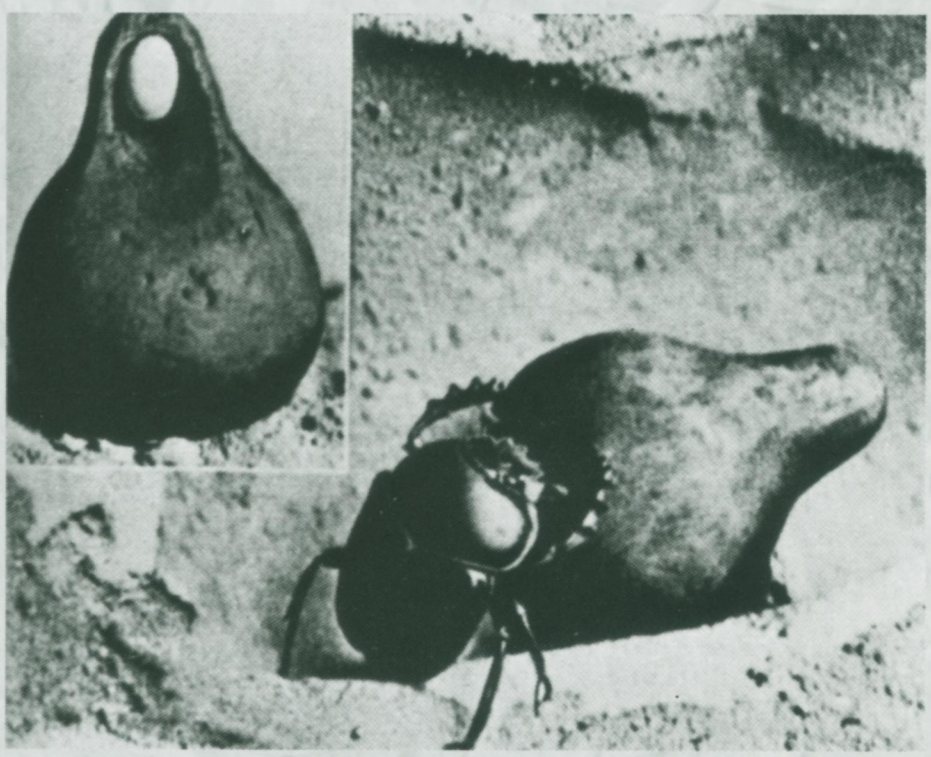
came almost the only back used on this class of object. It is this final stage of artistic development that is called the "scarab."[3] From about 2200 BCE to late in Egyptian history, scarabs remained one of the most common objects manufactured in Egypt. Hundreds of thousands are known in museums around the world. They are found in every excavation in Egypt and across the ancient world from Syria to Spain. By the end of its long history, the scarab had become a universal object in the Mediterranean countries and was manufactured in many places outside Egypt. What was created as a small amulet for women and children of the poorer classes of Egypt became an international object for all classes of people everywhere in the ancient world.

Life Cycle of the Dung Beetle

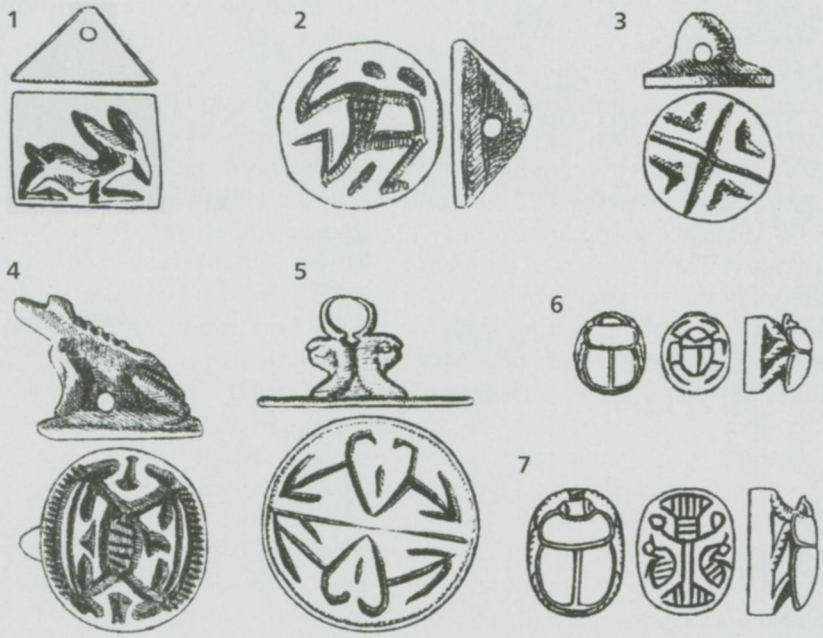
But the immediate question is: why the beetle? Or more specifically, why one species of this insect, the dung beetle? Nothing can be less inspiring to us than an army of beetles crawling around a dung-heap. But the Egyptians saw something vitally significant in that very situation. They saw a vision of rebirth into paradise, the resurrection of the soul; they saw the daily rebirth of their most powerful symbol, the sun, as it appears each morning over the eastern horizon.

They saw, of course, what they thought was the beginning and the end of the birth cycle of the dung beetle. Time after time, they witnessed the mature beetle rolling a ball of dung, burying this ball under the earth, and some fifteen to eighteen weeks later, a new beetle emerging from the ground. But the Egyptians misunderstood the life cycle of the dung beetle.

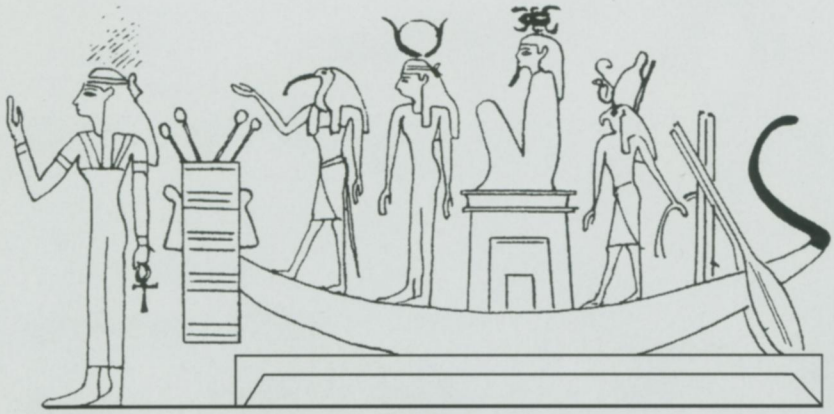
The dung beetle actually makes two balls of dung, one round and one pear-shaped.[4] The round ball is simply a food supply tucked away somewhere in the sand for storage in a kind of kitchen pantry. The pear-shaped ball is the one in which the egg is actually laid. But this pear-shaped maternal ball was made underground. Casual observers never see it; they see only the round ball made on the surface. This led to the



The female beetle makes an oval ball underground. The egg is placed in a pouch on this ball which becomes the food supply for the larva once the egg is hatched. Casual observers never notice the female's activity and can easily attribute the birth-cycle to the male alone. *Photograph by S. I. Bishara. From Ward 1978:101.*



Design-amulets and early scarabs. Scarabs are one form of an early type of object, the design-amulet, the earliest (1) having a pyramid shaped back. These soon developed into examples with shanks (2) and knobs (3) as well as animal and human figures (4–5). The beetle form, or scarab, was one of the latter, from the first small ones (6) to the larger more elaborate style (7). The objects shown here date ca. 2300 to 2100 BCE. *Drawings after Brunton (1927; 1948).*



The god Khepri seated in his bark as the personification of the morning sun; after a vignette to Chapter 17 of the Book of the Dead written during the New Kingdom. Khepri is identified by the symbol of a beetle on his head. The dung beetle *(Scarabaeus Sacer L),* the model for the scarab amulet, was associated with Khepri already in the Pyramid Texts of the Old Kingdom. He is frequently mentioned in the Book of the Dead as being a self-engendered deity who each night creates the morning sun that emerges the next morning. The name Khepri means "He who comes into existence (by himself);" that of the dung beetle/scarab was kheprer, "that which continuously comes into existence (by itself)." *Drawing from E. Naville1971:pl. 30.*

Important Egyptian officials were granted the use of a royal signet ring with which they could seal documents in the king's name. Here, an unnamed treasury official of King Tutankhamon (ca. 1336–1327 BCE) presents such a seal to the Viceroy of Nubia, Amenhotep, who is identified in this scene by his nickname Huy. In the book of Genesis, Joseph is said to have received such a seal when he became the Egyptian Minister of Agriculture. From the tomb of Amenhotep, no. 40 in the Theban necropolis. *Drawing from Newberry, 1906: pl. II.*

misconception that it is the large round ball in which the egg is placed and from which the new beetle is born. In reality, the male beetle works on the surface to create the family food supply, while the female is underground preparing the nursery.

In making the round feeding-ball, the dung beetle uses its powerful forelegs and a spade-like projection in front called the *clypeus.* These are the tools with which it works by scooping and molding the raw material until it forms a ball of dung about four to five times its own size. This is the task of the male beetle who laboriously collects the raw material; then pushing, patting, shaping, builds up a near-perfect sphere that is easily rolled to where it will be buried in the sand.

Meanwhile, the female labors underground making the pear-shaped maternal ball in which the egg is to be laid. Working alone, she burrows four to eight inches into the ground, digs out a chamber about four inches square, brings the raw material into this chamber, and creates the pear-shaped ball. At the ball's narrow end, she carefully constructs an oval hollow in which the egg is laid. The little chamber and the tunnel by which it is reached is then closed up. When the larva breaks out of the egg, it feeds on the maternal ball. When ready to change into the pupal stage, it burrows deeper into the earth. Here it carves out another chamber in which it changes into a pupa, feeding on plant roots. After two to three weeks, it emerges on the surface as a young beetle.

Symbolic Associations and other Uses

Observations of the dung beetle made by the Egyptians are what made this insect so important to them (Ward 1978: 43–46; de Meulenaere 1972; Giveon 1974). Here was a creature that emerged out of the earth, an immediate symbol of the resurrection of the dead. Because they misunderstood the actual birth-cycle, they apparently thought of the beetle as being of a single sex, male, who planted his seed in the round ball out of which came his offspring. They very early associated this mistaken view with the divine power they called Khepri, who was a form of the sun-god Re, the morning sun reborn by self-generation each day.[5] The beetle was also associated with Atum, to whom the creation of the universe was ascribed, and who was also self-engendered.[6]

The dung beetle thus became the supreme symbol of birth, of life, and especially the second birth into eternal existence. The little stone scarab had become a powerful amulet to help assure eternal life in paradise, a meaning which was maintained throughout its long history. The scarab signified the regenerative powers of Atum the creator, and Re, the provider of life. As such, it was a potent talisman indeed.

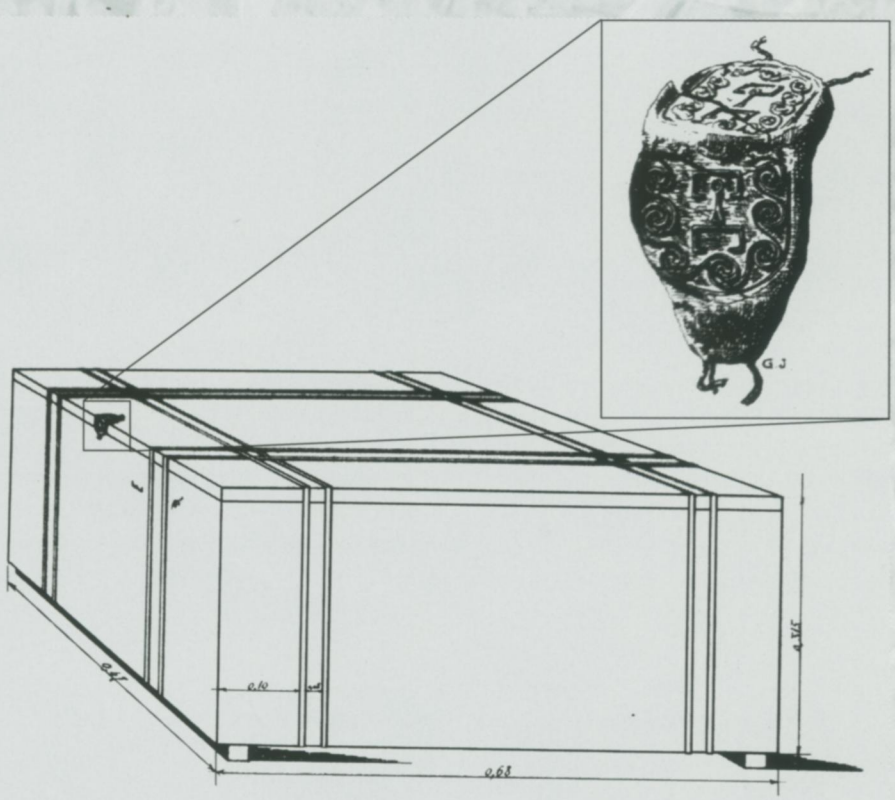
But scarabs also had other uses. We now know that the early design amulets were sometimes used as seals, for example, on the clay stoppers of pottery jars (Giddy and Grimal 1979:38–39; 1980:267–68). By around 2000 BCE, the impression of a scarab became a common method for sealing many kinds of objects. Their designs were impressed into the clay stoppers of pottery vessels, or the mud sealings on storage chests or rolled-up papyrus documents. Scarabs used as seals found extensive use in government administration at all levels.[7] With the advent of the Twelfth Dynasty, there appeared a new class of scarabs engraved with the names and titles of kings and government officials from prime

ministers down to humble caretakers of storehouses. Some officials of the central government were granted the privilege of using a scarab-seal engraved with the king's name. Since they acted in the king's name, they could thus use the king's name to sign documents.

This does not mean that all scarabs engraved with names and titles were used as seals. The scarab became an even more potent amulet for achieving the afterlife when it was engraved with a personal name. This identified the specific individual on an object which was intended to help the person gain immortality. This practice was carried even further with royal names. A king's personal name in itself had important magical properties since the king, while not a god during his lifetime as popularly believed,[8] did hold an office which had been created at the beginning of time and which was endowed with divine power. Scarabs naming especially venerated kings were made in bulk, often for centuries after their lifetimes. Such scarabs were obtained through visits to royal funerary temples as a souvenir of the prayers offered there by an individual on behalf of the royal soul.

One group of scarabs naming Sesostris I was made five centuries after his death (Ward 1971:134–36). Many Egyptian rulers were so honored long after their lifetimes. Scarabs naming Thutmosis III of the Eighteenth Dynasty, for example, were still being made a thousand years after he died (Jaeger 1982). A similar practice has continued down to the present day in Nubia. A scarab found by a local inhabitant often becomes a family heirloom, a kind of a magical good-luck piece, passed down from generation to generation.[9]

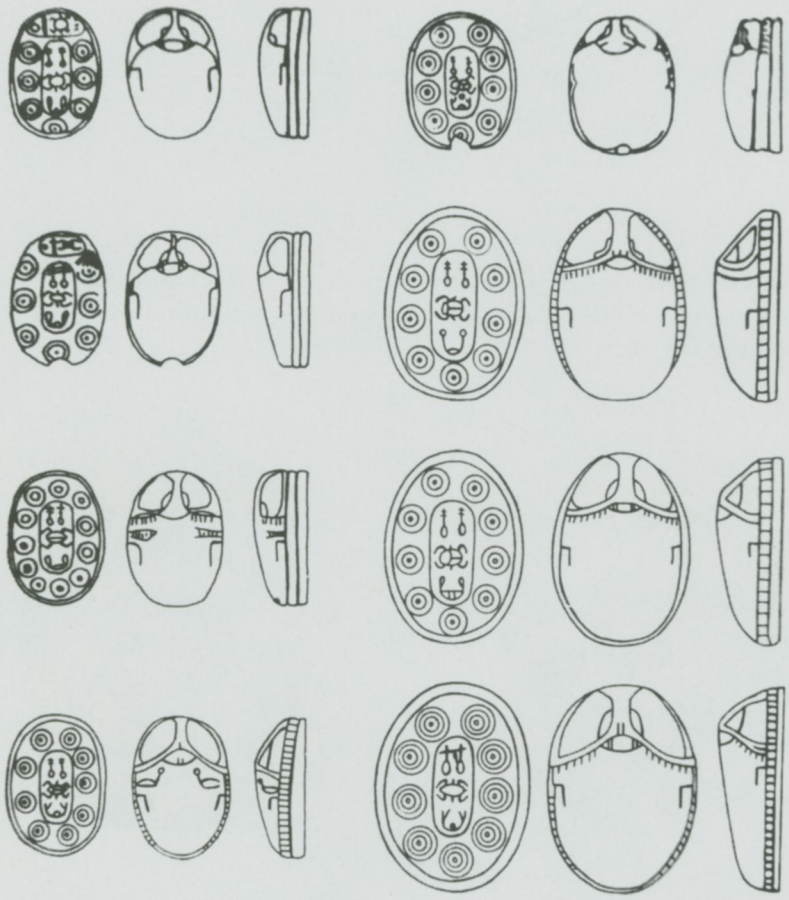
The scarab was also used as a piece of jewelry. Stone scarabs in gold or silver ring-mounts are quite common, and scarabs were often used as elements in pectorals, bracelets, and necklaces (Aldred 1971; Wilkinson 1971; Andrews 1990). While scarabs were thus used for decorative purposes, in Egypt they no doubt maintained their basic amuletic character. The horse shoe in America and blue bead in Near Eastern countries are used in the same manner today.



While the scarab was most commonly used as a talisman to achieve eternal life, it had other uses as well, for example, sealing papyrus documents or as in this case, a Middle Kingdom wooden wig box found at Lisht.

Commoners as well as kings inscribed their names and titles on scarabs that were sometimes used as seals. To the left is a scarab naming "The Steward Khnumhotep" of the Middle Kingdom and, to its right, one naming King Amenhotep III and Queen Tiy of the Eighteenth Dynasty. Note the V-shaped markings called the humeral callosity on the wing cases of the Eighteenth Dynasty scarab, a typographical feature that was not used before that time. It does not appear, of course, on the Middle Kingdom scarab. *Photographs courtesy of Dr. Daphna Ben-Tor, The Israel Museum, Jerusalem.*

Scarab of the Phoenician tradition, ca. 800–700 BCE. Phoenician craftsmen, always influenced by Egyptian art, produced a new type of scarab combining Egyptian motifs with those of other traditions. The result was often a complicated design and a highly decorated representation of the beetle itself. In this example, the decoration on the back is far more elaborate than on Egyptian scarabs and the design on the base is a mixture of many traditions. The central figure wears an Egyptian headdress and a Canaanite cloak, the winged sun-disc is taken from Assyrian art, and the four-winged scarab is a Canaanite adaptation of a common Egyptian motif, probably influenced by Hurrian prototypes. *Photos and drawing from Ward 1967:pl. 12:1 and p. 69.*



Scarabs engraved with royal names were most often amulets, not seals, and were continuously re-issued long after a king had died. In this group, an incorrect spelling of the name of Sesostris I (ca. 1943–1898 BCE) runs down the center of the design and two examples add the name of Amenhotep II (ca. 1427–1401 BCE) at the top. These scarabs were therefore made five centuries after the reign of the king they honor. *Drawings after Ward 1971:fig. 29.*

Manufacture

Scarabs were made of almost any kind of stone, often of glazed composition, or, more rarely of gold, silver, or bronze. The most common material used is universally known as steatite, though it is really a kind of talc (Lucas 1962:155–56; Richards 1992:5–8). In its natural state, this soft stone is easily carved and engraved, which accounts for its very common use in the manufacture of scarabs and other small objects. Once the scarab was fashioned, it was plunged into a hot liquid glaze. This accomplished two things: the glaze coating gave a smooth shiny surface to the object, and the intense heat of the glaze altered the chemical composition of the stone through dehydration so that it became very hard. This hardened form is properly called steatite. The glaze is actually an early form of glass that could be colored by the addition of coloring agents. Scarabs were most often given a deep blue or green glaze, imitating the color of the live insect. The second most common material is glazed composition, often termed faience, frit, or paste; again, this is a form of glass using the same ingredients but in different proportions (Lucas 1962:160; Ward 1993:95; Clerc, et al. 1976:24–28).

Scarabs, Scarabs, Everywhere

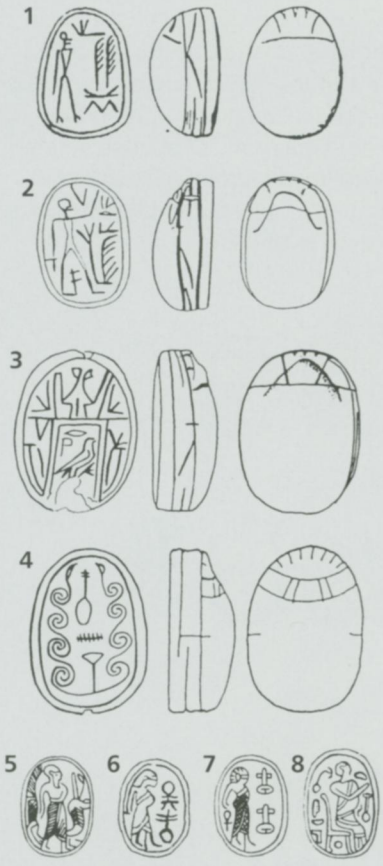
One of the intriguing things about scarabs was their popularity outside

Canaanite artists adapted the Egyptian scarab to local beliefs and engraving techniques as early as the Middle Bronze Age. One such adaptation is the use of symbolism in the "Omega-group" as on nos. 1–4, representing the Canaanite goddess Astarte. Examples like nos. 5–6 are included in this group as they are engraved in raised relief and show the same crude scarab style. A second group, the "naked goddess" of nos. 7–9, portrays Astarte herself in a typically Canaanite, but not Egyptian, stance. *Drawings after Keel 1989a and Schroer 1989.*

Egypt. This raises the question of what the scarab signified in foreign places and how much this peculiarly Egyptian class of object might be adapted to foreign ideas and beliefs. Such adaptations are already evident in Middle Bronze Age Canaan as shown by Othmar Keel and his colleagues in Freiburg. Two of these adaptations are the Omega-group and the nude goddess motif. The Omega-group (Keel 1989a) takes its name from the prominent symbol in the design resembling the Greek letter. Both this symbol and the symbol that usually accompanies it are said to represent a Canaanite fertility goddess, possibly Astarte. The symbols find their prototypes in the cylinder seal traditions of Mesopotamia and Syria. The designs are engraved in raised relief, which is not an Egyptian practice on scarabs, and seems to derive from copying cylinder seal impressions.

We have here, then, a local engraving technique with a mixed design repertoire of both Asiatic and Egyptian origin. The nude goddess shown frontally (Schroer 1989:93–121) is clearly a west Asiatic motif with prototypes on cylinder seals and the common Astarte plaques. Showing human or divine figures frontally runs contrary to the Egyptian practice[10] so that, in this case, both the subject matter and the method of representation are Canaanite rather than Egyptian.

The sources of other motifs are not as clear as these since they almost always include Egyptian hieroglyphs and symbols. Two of these are Keel's jasper-group and the well-known robed Canaanite figure. The jasper group (Keel 1989b) is characterized by stick-figures and careless engraving, and all examples are manufactured from hard stones. While the standing figures find ready comparisons with Asiatic cylinder seals, the jasper group scarabs make consistent use of Egyptian symbolism as well. The other design—the standing or enthroned male figure with Canaanite costume (Schroer 1985)—is obviously not Egyptian but again includes Egyptian symbols as part of the design.



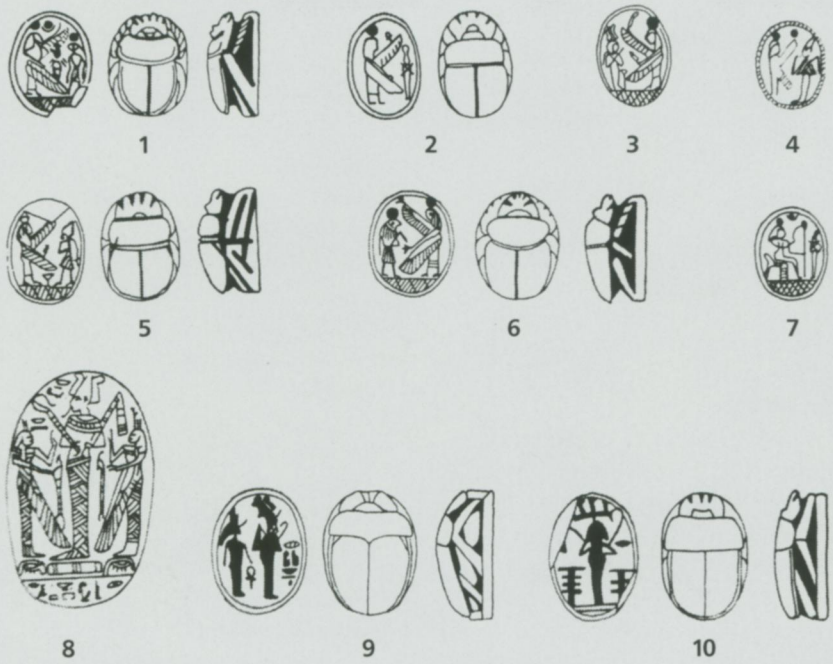
Other Canaanite adaptations of the Egyptian scarab include a series done in a local engraving technique, the "Jasper-group," nos. 1–4. Nos. 3–4, however, while carved in this Canaanite style are local copies of purely Egyptian designs. Nos. 5–8 represent the "toga-wearer" group, a royal figure in Canaanite costume, based on prototypes in Canaanite and Syrian art. *Drawings after Keel 1989b and Tufnell 1984*

The latter two scarab groups present a problem encountered with many scarabs and other objects found outside Egypt: what is the purpose of the use of Egyptian symbolism in a clearly foreign context? In other words, these Egyptian symbols have a particular significance within an Egyptian context. Was that significance the same in a foreign context, or was the meaning altered to suit the beliefs of that foreign context? Or are we here dealing with nothing more than symbols which are used merely as decoration in an attempt to copy admired Egyptian originals? Keel and his colleagues support the idea that Egyptian symbolism was altered to suit Canaanite beliefs. Their arguments are not convincing, and these scarabs may be merely bad copies with no local religious significance.

The same problem of interpretation is found in other foreign scarab traditions. In the early first millennium BCE, we begin to find large collections of

Egyptian artistic influence, including the scarab, is found on jewelry made locally around the Mediterranean. This gold bracelet from Sardinia, dating ca. 700–600 BCE, is embossed with Egyptian palmettes, lotus flowers, and the "flying scarab" motif. The latter proves the non-Egyptian origin of the piece as it portrays the scarab with four wings, a common foreign adaptation of the two-winged flying scarab typical of Egyptian art. The four-winged variant probably originated in Syria under the influence of Hurrian art which used such four-winged figures extensively.

scarabs of the so-called Phoenician style in Mediterranean Europe, for example at Ibiza, Spain and Tharros, Italy (Fernández and Padró 1982; Acquaro, Moscati, and Umberti 1975). Hundreds were found at Carthage on the North African coast (Vercoutter 1945). This Phoenician scarab tradition is dominated by hard stones, chiefly jasper and carnelian, and shows a strong Egyptian influence in the repertoire of motifs (cf. Culican 1968:50–56).[11] A large portion of such scarabs were manufactured locally and, by indirect evidence, we can point to Carthage, Phoenicia, Rhodes, Greece, Sardinia, and Italy as having workshops where these scarabs were produced on the spot.



Phoenician (nos. 1–7) **and Egyptian** (nos. 8–10) scarabs portraying a scene from the Isis-Osiris myth. This and many other scenes from the myth are known from hundreds of Phoenician scarabs found throughout the Mediterranean world. The scarab evidence indicates that the popularity of Isis in foreign cultures may have arisen somewhat earlier than now supposed. *Drawings after Ward 1970b.*

The Phoenician scarab style was borrowed by Greek gem engravers in the sixth century BCE, who perhaps learned the art of cutting hard stones from Phoenician craftsmen. By the end of the fifth century, the scarab form became much less used as this archaic Greek style gradually changed into classical Greek gems (Boardman 1968; Boardman and Vollenweider 1978). The Greek scarab style was soon brought to Etruria by Greek immigrants where a new and distinctly Etruscan tradition appears from the sixth to third centuries. This is characterized by its widespread use of a deep red carnelian, decoration on the edge of the plinth and wing cases, and local engraving techniques (Boardman 1975; Zazoff 1968). Both the Greek and Etruscan traditions early introduced a design repertoire of their own, and the Egyptianizing motifs gradually disappeared.

Concurrent with these Phoenician, Greek, and Etruscan hard-stone styles, countless other scarabs of steatite and glazed composition were being manufactured at, among other places, Carthage, Perachora in south-eastern Greece,

and Lindos on Rhodes (Vercoutter 1945; James 1962; Blinkenberg 1931). The sum total is quite remarkable; scarabs are found in quantity throughout the Mediterranean from the early first millennium BCE into Hellenistic times.

Scarab popularity

It is frankly difficult to account for this. The facts of which we can be certain are these. Egyptian scarabs were very popular abroad among local populations. At least as early as 800 BCE, scarabs in the Phoenician style were manufactured abroad. While these foreign scarabs retained much of the design repertoire of the Egyptian tradition, foreign techniques, motifs, and designs were introduced which altered the character of the Egyptian originals.

Just why the Egyptian scarab became so popular abroad is hard to say. Certainly, the meaning of the scarab as an amulet to help attain a cheerful afterlife did not really apply in other societies. The afterlife as conceived by most religions of western Asia was a rather dismal existence in a cave beneath the earth where everyone went after death, irrespective of how they had lived in this life. The Greeks looked forward to their own gloomy Hades. It does not seem logical that such societies would care much for the amuletic character of the Egyptian scarab. Still, in the first millennium BCE, ideas about the next life were changing. The Asiatic religions and the new cults that sprang up everywhere now taught that divine reward and punishment were reserved for eternity and good or evil actions in this life would determine whether that eternity was spent in bliss or misery. In this context, the scarab may have held more significance.

There is scarab evidence that the Egyptian Osiris myth, which was intimately associated with resurrection, became popular beyond Egypt. One cannot say how early this myth became attractive outside Egypt, but by the early first millennium BCE, episodes from this myth are portrayed on scarabs made abroad. Practically all the major episodes in the Osiris myth are found on scarabs made in Mediterranean countries, illustrating the popularity of this myth in foreign places. Indeed, there are more scarabs portraying a larger variety of scenes from the Osiris myth found abroad than there are from Egypt itself,[12] conforming to the general spread in the first millennium of Isis as a universal mother-goddess. This was an attribute which was not part of her original character in Egypt, though it did eventually emerge there because of her immense popularity.

With the possible exception of such scenes which can be related to the spread of Egyptian religious beliefs, it seems probable that the most extensive use of scarabs in foreign places was simply for jewelry and decorative design. Scarabs mounted as finger-rings, ear-rings, and pendants are found in all the traditions noted here—Phoenician, Greek, and Etruscan. As decorative motifs, the scarab was used on the ivories and metal bowls for which the Phoenicians are so well known, and on other objects such as the bracelet from Tharros *(see photo on page 192)*. It seems likely that, in these contexts, scarabs were seen more as exotica than as symbols of thought and belief.

When the scarab was adopted by cultures in the west, there were appropriate changes, especially in the design repertoire. The green jasper scarab (top) was engraved in the Greco-Phoenician style with a purely Greek motif, Herakles holding a club and a bow and arrows. The sardonyx scarab (bottom) is of Etruscan origin, the motif again from the classical repertoire. Here, Herakles stands on the left, holding up the heavens with one hand and grasping a club in the other. He is accompanied by Atlas plucking apples from a tree around which twines a serpent with three heads. The Egyptian scarab in the west was thus transformed into a Greco-Roman object, an ancestor of the engraved gem tradition of the Classical Period. *Photographs by Pia Ward. Courtesy of the Department of Classical Art, The Museum of Fine Arts, Boston.*

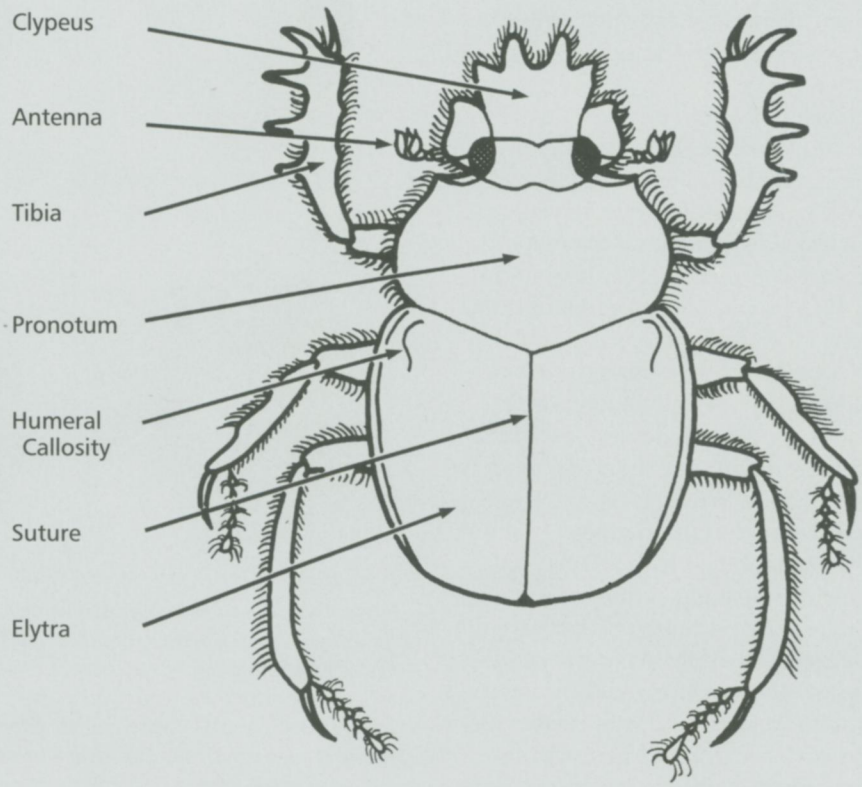
The Trouble with Scarabs

Multiplicity and Variabilty

"The trouble with scarabs" is an apt title for the remainder of this article. The trouble with scarabs is that there are so many and, with the exception of those made of glazed composition in molds, no two are alike. The pure bulk of scarabs is well known to anyone interested in archaeology. The enormous number of scarabs made in Egypt is due to their basic character as amulets, including those engraved with royal names. The religious beliefs of ancient

Egypt demanded an extraordinary range of amulets of all kinds—the scarab was merely one of an almost endless variety (see, e.g., Petrie 1914; Müller-Winkler 1987). Because of its initial association with the gods Atum and Re, and then with all deities, and kings, and the thousand other forces that brought protection from evil, the scarab became one of the most popular amulets, equaled only by the sacred eye of Horus. Their sheer bulk, then, is due to a popular demand for yet another amulet that offered protection from evil.

It is perhaps not as well known that no two scarabs are the same, with the exception of those made in molds. For example, in the Middle Bronze III Age, the so-called Hyksos period (ca. 1650–1550 BCE), the numerous varieties of heads, backs, sides, and designs used at that time permit over one hundred thousand typological combinations. Adding the category of scarab size—and only those most commonly used—the possible combinations become about one million. The endless variety of scarabs is thus due to these two primary factors: they were desired as amulets to obtain the good will of the supramundane world, and the engravers who made them had available a very wide range of typological features from which to choose.



The Egyptian Dung beetle *Scarabaeus Sacer L.* The beetle's strong forelegs and shovel-like clypeus enables it to form balls of dung four times its size. The humeral callosity is one of the typological features that helps to distinguish scarab style. *After Ward 1978, Frontispiece.*

Scarabs and Dating. Now the fundamental question we have all asked for a long time is this: If there are so many scarabs, and if they are found in archaeological contexts everywhere in the ancient world, would they not be useful in dating archaeological levels at this or that site? Could scarabs, like pottery or coins, become another tool by which cultural sequences and archaeological periods can be defined? This problem was first addressed by Flinders Petrie in 1889 and has been studied ever since by scholars who have devoted much time and energy to find acceptable answers (surveyed in Ward and Dever 1994).

Methodology. The method employed in this task was always first to create a stylistic history of scarabs based on those inscribed with royal names. This yielded a chronological skeleton and set up a rough sequence of typological changes which could then be applied to the vast numbers of scarabs inscribed with other designs, which are by far the most numerous. Having done this, one then compared scarabs from new excavations with the established typological sequence and assigned a date to this or that archaeological level, to this or that tomb. It ought to have worked, but it didn't. The basic idea is all right—link a stylistic history of scarabs to the chronology of Egyptian kings—but it is really not as simple as it sounds.

Difficulties abound. First, the primary emphasis has been on the endless multitude of designs engraved on the base of scarabs. The study of scarab history has thus been primarily a history of the designs, not the scarab as a whole. It is like studying coins only from the obverse side, or Attic vases only from the paintings, or Canaanite pottery only from the rims. One cannot ignore the reverse side of coins, or the shapes and fabric of Attic vases, or the necks and sides and bases of Canaanite pottery. One must consider the whole object. This is axiomatic in archaeology and has always been recognized as the proper way to study and organize any class of object. But scarabs have too often been treated as if they consist only of the designs engraved on their base; the scarab itself was relatively unimportant. Even when scarab backs and sides were considered, they took second place to the designs.

A second difficulty is that there are several classes of scarabs: those engraved with designs, those with royal names,

those with private names, and scarabs of any of these groups made in hard stones. While in any given period, these classes share some typological features, each has its own peculiarities of style so that we must deal with several lines of stylistic development that are the same at some points, but quite different at others.

Third, it has become increasingly evident that many royal name scarabs were made long after the lifetimes of the kings they commemorate, sometimes centuries later. A stylistic history of royal name scarabs must therefore define which ones are contemporary and which were made later. Otherwise, one gets a very incorrect view of the typological history of royal name scarabs which then skews the history of the design scarab tradition.[13]

Finally, even contemporary royal name scarabs are not always a reliable guide. A parade example is the large group of scarabs naming the so-called Sebekhotep kings of the Thirteenth Dynasty. No one questions that most are contemporary products; they belong to the second half of the seventeenth century BCE. For that reason, this scarab group, numbering well over a hundred (Tufnell 1984:pls. 54–56), is still considered a key point in the chronology of scarab style. In reality, however, this particular scarab group has its own unique typology. It stands alone and in no way reflects what the rest of scarab production looked like in the Thirteenth Dynasty. This group really represents what scarab manufacture was not like in the later seventeenth century BCE (Ward 1987: 512).

Tufnell's Contribution

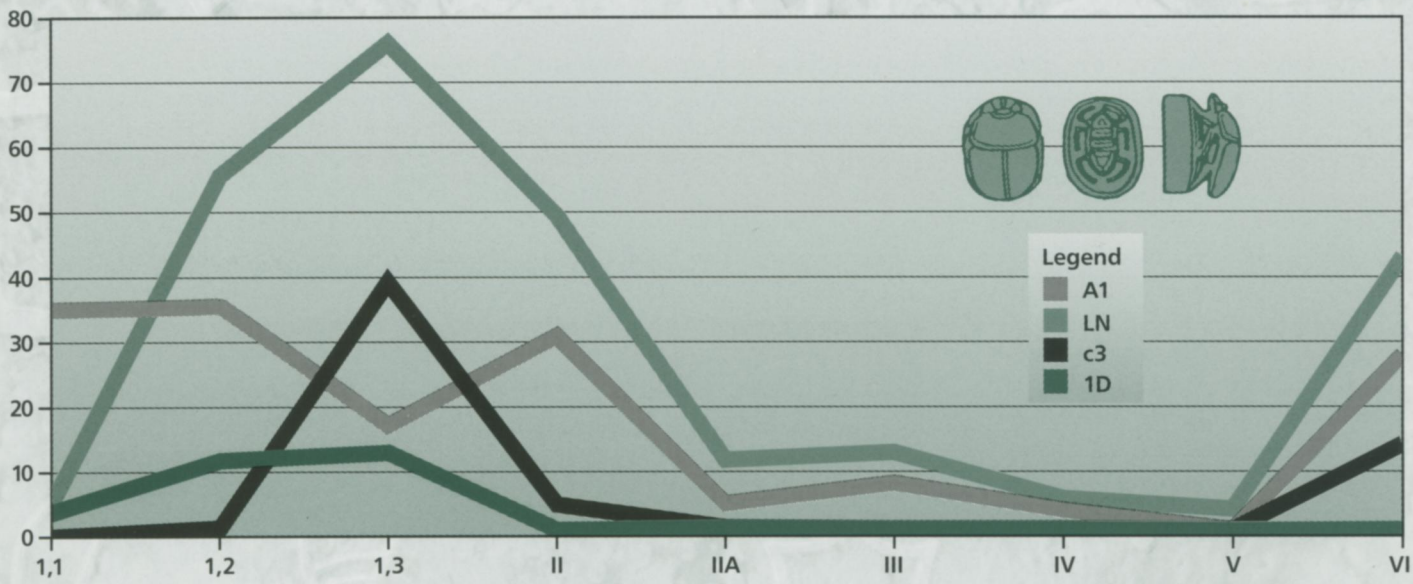
These are a few of the difficulties. There are many more, but these are enough to illustrate that there must have been something wrong with the traditional approach to scarab history. In spite of the enormous effort put into their study for more than a century, the use of scarabs as a chronological tool has remained very limited. Olga Tufnell felt this in the 1950's as she put together her volumes on Lachish (Tufnell 1958). There were hundreds of scarabs from that site, but the reference works of the time did not supply the answers she wanted from all this material. It was the Lachish publication that set her on a course of study that was to continue until she died in 1985. In 1962, when Tufnell was in Beirut working on the Montet Jar treasure, I joined her project and we began a happy collaboration that lasted over 20 years.

Tufnell decided that a different approach was needed. All the accepted conclusions about scarab history had to be discarded. Most of the dating criteria which had become archaeological law had to be ignored. The emphasis on

Design scarab chronology showing selected characteristic typological features from the beginning of scarab manufacture to the early Eighteenth Dynasty.

	I,I	I,2	I,3	II	IIA	III	IV	V	VI
Side a	X	X							
Side b1	X	X	—	—					—
Head A1	X	X	X	X	—	—	—	—	X
Design 1	X	X	X	X	—	—	—	—	—
Side b2	—	X	—						
Head A3	—	X	X					—	X
Side c3		—	X						X
Design 2		—	X	X	X	—	—	—	—
Side e5				X	—	—	—	—	—
Side e6			—	X	X	X	—	X	X
Head B2		—	—	X	X	X	X	X	—
Side e9					X	X	X	X	
Side d5					X	X	X	X	X
Design 3B1					—	X	—	—	—
Design 3C					—	X	X	—	—
Design 7B			—		—	X	X	—	—
Side d6					—	—	X	X	X
Design 6			—	—	—	—	X	X	—
Design 10					—	—	X	X	X
Head D9							—	X	
Head B3					—	—	—	X	
Side e11a							—	X	
Design 11A					—		—	—	X
Design 11D									X

Each chronological period has its own unique group of characteristic features. These are usually not the major typological categories, but the sub-types of these categories. Some features are characteristic only in one chronological phase, others are characteristic over several; the latter are of little use in dating. The typological sequence shown here is exactly like that of any pottery seriation. The features most commonly used in Period I,1 (early First Intermediate Period) are very different from those in Period V (Fifteenth Dynasty). The stages in between show the normal progression of change one also finds with pottery, old features dropping out, new ones being added, and a few used frequently over long stretches of time. In Period VI (earlier Eighteenth Dynasty), for as yet unexplained reasons, several early typological features that had gone out of use suddenly reappear.



How the system works. The scarab illustrated here is from a large group found in a tomb of the mid-18th Dynasty, ca. 1450 BCE, though its typological profile shows it was made almost five centuries earlier. Applying the typology discussed in this essay, this scarab has the simplest lunate head with no markings (A1), a lined naturalistic back (LN), a high profile with the legs cut *á jour* (c3), and an animal figure as the only design (1D), in this case a beetle. The graph plots the percent of use of each of these features through nine chronological phases from the earliest scarabs (Period I,1) to the mid-18th Dynasty (Period VI).

The date of manufacture is most likely to be that chronological phase in which all four features were characteristic, hence when there was the highest probability that they would appear on the same scarab. In this case, the date is Period I,3, the later 11th Dynasty. Note that Head A1, Back LN, and side c3 were also common in the 18th Dynasty when several typological features long out of use suddenly reappeared on scarabs of that time. However, this date is ruled out by several factors: the high profile was a dominate feature only in the earliest periods of scarab manufacture; the small size (length 10 mm) and design 1D were characteristic only then; there are excellent parallels from First Intermediate Period burials (Ward 1978, pl. 6: 153–155). *Scarab drawing from Tufnell, 1984:114, fig. 24:32.*

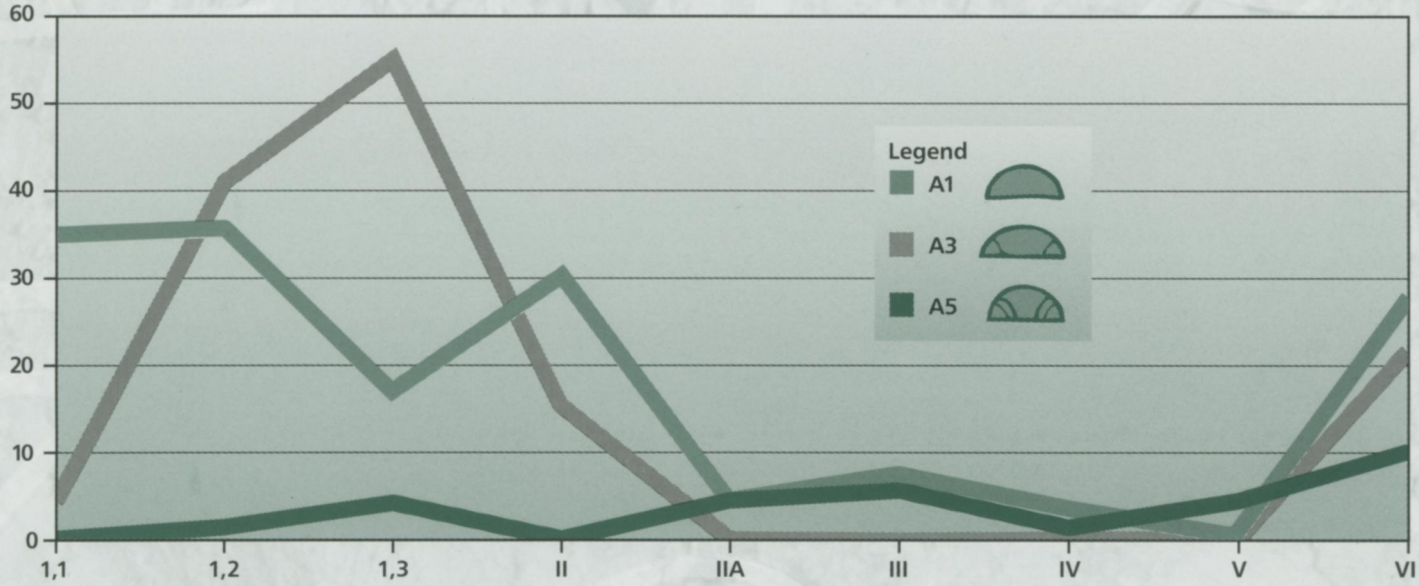
royal name scarabs was faulty, so this, too, had to go.

Since the bulk of scarabs are design scarabs, they would be a better starting point. Once a typological history had been gained from design scarabs found in datable archaeological contexts, then the royal name scarabs could be brought into the equation, but not before. Tufnell insisted that the whole scarab needed to be considered, not just the design on the base. Every head, every side, every detail had to be examined. And the core sample must be based on large groups of excavated examples. These were to be found at stratified Canaanite sites, not in Egypt where large groups of scarabs and impressions are generally found in contexts covering long periods of time. Only after a stylistic history of design scarabs had been established should one turn to scarabs with royal names, and then only after the troublesome scarabs naming Twelfth Dynasty kings had been sifted thoroughly to determine which were contemporary.[14]

Scarab Style

The history of scarab style is very much like that of pottery. When a new pottery form is introduced, it appears first in small numbers. As its popularity increases, examples become more and more numerous until it begins to go out of style. Examples then become fewer and ultimately disappear. An archaeological phase is distinguished by a group of pottery forms and details such as rims, handles, and bases which have reached their apex of usage, though all may appear earlier and later than the phase in which they dominate. This is also true of scarabs, though on a rather more complicated level.

I am the first to admit that the typological system developed by Tufnell and myself over the years is far from simple. It is not easy to use and is sometimes cumbersome, but that is the nature of the material, not the system. It is impossible to produce an easy-to-read dating chart which has all the facts illustrated on one quick-reference diagram. We defined some thirty major categories of style—heads, backs, sides, and designs—broken down into over two hundred and fifty sub-types (Ward 1978:20–33; Tufnell 1984:27–38). While the major categories do show a general chronological sequence, it is the subtypes which are often more important because they come and go more quickly and are thus more reliable indicators of chronological sequence. As with a pottery sequence, each phase in the history of scarab style is distinguished by a group of typological features which were most commonly used during that phase. To show how important the details are, often minute ones, let me note first the detail with the funny name — the humeral callosity. This is a natural



Even the smallest details may be important in dating scarabs. The graph plots the percent of use of three similar lunate head types from the beginning of scarab history to the mid-18th Dynasty. The typological differences between them are slight: A1 is plain, A3 has tiny single lines marking the eyes, A5 has double lines. The chronological differences, however, are significant. Prior to the New Kingdom, A1 and A3 were very common up to the early years of the 12th Dynasty (Period II), A5 was more likely to be used in the 12th to 15th Dynasties (Periods II–V). All three appear rather suddenly as characteristic heads in the 18th Dynasty (Period VI). While none of these head types provides a specific date, they do limit the possibilities; for example, head A3 points to either the First Intermediate Period or the 18th Dynasty. Other typological features used with A3 heads will determine which date is the correct one: a side type c, cut *á jour*, points to the earlier date; the figure of a deity as the design indicates the 18th Dynasty.

marking on the live beetle, represented on scarabs by the little V-shape marks on the wing-case. The humeral callosity first appears, but extremely rarely, on scarabs at the very end of the Hyksos period, just before the advent of the Eighteenth Dynasty. From then on, these markings become standard on scarabs with lined backs, that is, where the wing-cases are outlined by engraved lines. This detail is therefore an excellent broad indicator of date: scarabs with the humeral callosity belong to the Eighteenth Dynasty or later. That is of great help for, among other things, isolating the many later reissues of scarabs naming Twelfth Dynasty kings. Scarabs naming Sesostris I, for example, were still being manufactured in the Eighteenth Dynasty and even later. Many can be judged as late only by the appearance of the little V's on the wing-case.

While the humeral callosity is an easily recognized feature, even the tiniest details of scarab typology can be chronologically significant, This means that every aspect of scarabs has to be investigated—heads, backs, sides, designs, and even the less significant features such as size and material. Typing individual scarabs takes time and can be frustrating, but the proper analysis of their various components does allow most scarabs to be dated. Unfortunately, there are many scarabs with typological features that were all used over long periods of time.

This emphasizes an important point about using scarabs for dating. Individual scarabs are usually not helpful. But groups of scarabs are a different matter. Again, pottery is a good analogy. A single pottery vessel is not a good dating criterion unless it is known to have a very restricted period of use. In general, a single pot is not sufficient to date a burial or house level. But a group of pottery vessels of varying sizes and shapes can point to a specific archaeological period. The larger the group, the easier it is to assign a date.

Canaanite Tomb Scarabs. Groups of scarabs act the same way. A good example is a fairly large group of scarabs found in Canaanite tomb deposits of the later Middle Bronze I and transitional I/II periods (Ward and Dever 1994). This group has some sixty different typological features. Some are useless as dating evidence since they appear rarely on scarabs as a whole. But there are sufficient features used frequently enough in this group to establish a typological profile. We have here, then, a set of typological features which can be used to give a broad definition of what scarabs of the later MB I and I/II transition periods should look like, i.e., in scarab Period IIA, Twelfth Dynasty. These Period IIA scarabs form a bridge between the preceding stages of scarab history (Peri-

Periods of Scarab Typological History with Approximate Dates BCE

Date BCE	Egypt Dynasties	Scarab Periods	Canaan	Archaeologically Dated Scarab Groups
2200	End Old Kingdom 2185	I, 1–3	Early Bronze IV	Material from Egyptian sites. First Intermediate Period, into early years of 12th Dynasty.
2150	F.I.P. Dyn. IX/X (north)			
2100	Dyn. XI (south)			
2050				
2000	2033 Dyn. XI		2000	
1950	1963	II		Montet Jar scarabs from Byblos. Typologically related to last phase of Period I. Early 12th Dynasty.
1900	Dyn. XII	IIA	Middle Bronze I	Scarabs from Canaanite sites of MB I and I/II transition. 12th Dynasty.
1850				
1800	1786		1775	
1750	Dyn. XIII	III	Middle Bronze II	Scarabs from Jericho and Megiddo. MB II. Later 12th, early 13th Dynasty.
1700		IV		Scarabs from Jericho, Megiddo, and ʿAjjûl. MB II. 13th Dynasty.
1650	1650		1650	
1600	Dyn. XV (north) Dyn. XVII (south)	V	Middle Bronze III	Scarabs from Jericho, Megiddo, Fara, and ʿAjjûl. MB III. 15th Dynasty.
1550	1550			
	Dyn. XVIII	VI	Late Bronze I	Scarabs from Lahun, Gurob, and Sedment. LB I. Earlier 18th Dynasty.

A dozen archaeologically dated scarab groups from both Egypt and Canaan have been tested against the basic design scarab series listed above. All date to the typological phase to which they should belong, verifying the results gained from the main series. The absolute dates for Egypt, based on Kitchen's latest assessment (1989), are approximate. Canaanite archaeological phases after Ward and Dever (1994). Changes in absolute Egyptian chronology will cause similar changes in Canaanite archaeological chronology.

ods I-II) and the one that follows (Period III). As with a pottery sequence, the scarab sequence shows a gradual change in the characteristic scarab features allowing us to define several succeeding phases in scarab manufacture.

So a clear and progressive stylistic chronology can be established. How does this fit into a relative chronology between Egyptian historical periods and the archaeological phases of Canaan? This is shown in the chronological chart. Period I, which breaks down into three distinct phases of scarab manufacture, is dated by archaeological context from the early First Intermediate Period to about the early years of the Twelfth Dynasty. The Montet Jar group, Scarab Period II, is so closely associated with Period I that it must follow immediately thereafter. These two periods are contemporary to the late Early Bronze and early Middle Bronze I ages. Periods IIA and III are closely related to royal name scarabs of the later Twelfth Dynasty which fixes them somewhere in that period. Since Period IIA falls archaeologically in the Canaanite Middle Bronze I and the I/II transition, Period III falls in the earlier Middle Bronze II Age. Scarab Period IV, which progresses neatly from III is thus roughly the Thirteenth Dynasty, or the later Middle Bronze II Age. Period V is archaeologically associated with the Egyptian Fifteenth Dynasty and the Canaanite Middle Bronze III Age.

Absolute Chronology. If a relative chronology is fairly simple to establish, an absolute chronology is not. I must note here the chaos into which Egyptian absolute chronology has been thrown in recent years.[15] In 1950, Richard A. Parker concluded, after a detailed study of the astronomical and other evidence, that the Twelfth Dynasty ruled for 206 years, from 1991 to 1786 BCE. These dates became a kind of comfortable friend to students of comparative history and archaeology who depend a great deal on the chronology of Egypt. Parker's astronomically fixed absolute dates for the Twelfth Dynasty went unquestioned for over three decades. A sense of order prevailed both in Egyptian history and in setting out the general limits of Canaanite archaeological phases.

In the past decade, a series of studies have appeared which challenge Parker's conclusions and lower the dates for the Twelfth Dynasty by over half a century. This research is based primarily on exhaustive studies of the astronomical evidence, some of which had never been published previously. The new dates proposed for the Twelfth Dynasty are 1937–1759 BCE. It is doubtful, however, that this lowering of Twelfth Dynasty chronology is going to stand up since it is built on certain assumptions that either are not true or cannot be substantiated.[16]

This is not to say that Parker's original dates for the Twelfth Dynasty are carved in stone. Some adjustments have had to be made in the matter of coregencies and the lengths of individual reigns. It seems most likely that the Twelfth Dynasty ruled for 178 years, from 1963–1786 BCE (Kitchen 1989), and these are the dates I am now using. It must be emphasized, however, that even these absolute dates are approximate though they do represent, I think, the best we can do at present.[17]

In terms of an absolute chronology for Canaanite archaeological phases, the scarab evidence indicates the dates given on the charts. Middle Bronze I began some time before the Twelfth Dynasty, ca. 2000 BCE, Middle Bronze II began toward the end of that dynasty, ca. 1800/1750 BCE, Middle Bronze III began ca. 1650 BCE, the so-called Hyksos Age.

To sum up very briefly, there are nine well-defined phases in the history of scarab manufacture from their initial appearance at the end of the Old Kingdom into the earlier Eighteenth Dynasty. These phases represent a continuous development in scarab typology, each phase with its own characteristic typological profile. This typological history is based on excavated collections and has been defined by a detailed study of all typological features of scarabs, the first attempt to do so. These nine stages in scarab history can be roughly equated with Egyptian dynasties and Canaanite archaeological periods and are helpful in providing absolute dates for the latter.

As a final note, I should emphasize that the completely new look at scarab history that Tufnell and I worked on for so many years was bound to contain some errors. No matter how well planned a project may be, mistakes are inevitable when such a vast amount of material must be considered. A thorough revision of the project (Ward and Dever 1994) has hopefully removed the major defects and given greater clarity to both the typological system developed by Tufnell and how it applies both to Egyptian and Canaanite history.

Notes

[1] Most notably the dung beetle *(Scarabaeus Sacer L.)*. A general misconception is that *Scarabaeus Sacer L.* was the only beetle honored by the Egyptians as this species is the one most commonly represented. In reality, there were others, for example, the long, thin beetle known to the Egyptians as the *ankh*-beetle, found as an amulet already in Gerzean times (Ward 1978:43–44). Furthermore, scarabs do not always represent *Scarabaeus Sacer L.*, but many other species as well (Bishara 1978:88–91). While the present essay is concerned primarily with the dung beetle as the scarab par excellence, the Egyptians did not make the biological distinctions of modern science and seem to have passed on to a whole class of insect the respect they gave to *Scarabaeus*. It was the latter's life cycle, however, that influenced them the most.

[2] When design amulets first began turning up in burials, they were considered foreign imports as they were a new type of object in Egyptian archaeology. Early studies suggested diverse foreign origins, especially the Aegean and Anatolia (e.g., Newberry 1906:59–61; Petrie 1925:1–3; Frankfort 1939:296–98). It is now quite certain that in both form and design this class of object is purely Egyptian (Ward 1970a).

[3] The classic general studies of scarabs for many years were those of Newberry (1906) and Petrie (1917), though both are now out-dated. More recent works of good quality are those of de Meulenaere (1972), Hornung and Staehelin (1976:13–193), Boochs (1982), and Ben-Tor (1989). The specialized literature on the subject is quite extensive; cf. Martin (1985) for a bibliography listing almost seven hundred items, exclusive of scores of discussions in individual excavation reports.

[4] On the life cycle of the dung beetle, see Bishara (1978), an Egyptian biologist who has made a life-long study of the beetles native to Egypt.

[5] For example, from Chapter 15 of the Egyptian *Book of the Dead:* "Greetings Horakhty (= the sun), Khepri the self-engendered. How excellent when you appear in the horizon and brighten the two lands with your rays."

[6] For example, in a short hymn to the sun from Spell 587 of the Egyptian Pyramid Texts, Atum is identified as Khepri, both being forms of the sun: "Greetings Atum! Greetings Khepri the self engendered. … May you (i.e., Atum) come into existence in this your name of Khepri."

[7] Note especially the hundreds of administrative sealings from the town of Lahun ("Kahun") and the Egyptian fortress at Uronarti in Nubia, now conveniently collected and studied by Tufnell (1961). On Egyptian seals and sealings in general, see Boochs (1982).

[8] Kings could and often did become gods after their death. The extent to which a king achieved divine attributes in his lifetime has long been debated; the difficulties involved are conveniently summarized in Silverman 1991. On occasion, a venerated commoner might also be elevated to divinity (Otto 1943). It must be emphasized, however, that English terms such as "god" and "divine" imply modern theological concepts that do not necessarily reflect those of antiquity. The whole debate on the supposed "god-kings" of Egypt has been colored by ignoring this rather important point.

[9] Cf. Ward 1976 on a scarab in the possession of a Nubian family for seven generations. By a strange coincidence, the son who will inherit this object bears the same name as the Egyptian official who once owned it, yet the child was named before the parents knew what was written on the scarab.

[10] The rare exceptions to this are the god Bes, usually shown frontally to emphasize his physical appearance, and the head of Hathor, iconographically associated with the sistrum (a percussion instrument) which was normally portrayed frontally.

[11] While it is generally felt that this tradition belongs to the Iron Age, its origins must certainly be earlier. Scarabs in this style are very numerous and can be seen throughout the literature and in unpublished museum and private collections. All this is currently being assembled for the *Corpus Glyptica Phoenicia* Project in Brussels.

[12] A very summary list in Ward 1970b:348–49. In reality, the number with Osiride scenes is very extensive, and examples can be found in any collection of scarabs excavated in most places around the Mediterranean.

[13] The major attempt to do create such a typologivcal history is that of Jaeger (1982) who deals primarily with the scarabs of Thutmosis III, but includes other rulers of the New Kingdom. Jaeger's methodology was subsequently followed by Weise (1990) who is concerned with portrayals of kings on scarabs. While Jaeger studied only the designs on scarab plinths, it is of interest that when the other typological categories are considered, those scarabs of Thutmosis III that he judged to be contemporary fall into place where they should in the royal name series of the Eighteenth Dynasty (Ward 1984).

[14] In pre-New Kingdom times, it is only with this dynasty that later re-issues must be seriously considered. Very few were produced for Thirteenth Dynasty rulers, none for those of the Hyksos and their vassals and probably none for the Seventeenth Dynasty. The matter of contemporary manufacture versus re-issues for Twelfth Dynasty royal name scarabs has been a problem from the start and is still debated in current literature (e.g., Tufnell 1984 versus O'Connor 1985).

[15] Literature on this subject grows annually; I have elsewhere summarized the debate as it stood in 1990 (Ward 1992). Other studies have appeared since then, notably Luft's analysis of chronological data in the Illahun papyri (Luft 1992).

[16] The key problem in the long debate is whether or not there was a single point in Egypt at which official astronomical observations were made. This chiefly concerns the helical rising of the star Sirius which heralded the advent of a new lunar year. The argument centers around Memphis and Elephantine as having a kind of national observatory where such sightings were made and then communicated to the rest of the country. However, a heliacal rising or any other astronomical event was observed on different days all along the Nile Valley; seven days earlier at Elephantine than at Memphis, for example. Due to the obvious impossibility of communicating an astronomical sighting to the whole country on the same day, it is evident that such important events as the beginning of a new lunar year occurred on different days in different regions of Egypt and that each region followed its own local lunar calendar. Since the purpose of the lunar calendar was to organize the complicated system of religious festivals and rituals, it did not matter that a given festival at Memphis had already taken place a week earlier at Elephantine. What mattered was that the festival took place on the designated day of the lunar calendar at any place in the country.

All this, of course, concerns only the lunar calendar. The Egyptian civil calendar with its regular 365-day year was the one used for administrative purposes at all levels from recording military campaigns to dating personal letters and laundry lists. The two calendars served two different purposes: one to organize religious festivals and ceremonies, the other to organize daily life. Since the lunar calendar was shorter than the civil calendar, the two were almost always out of synchronism. This may be a problem for modern scholarship but was not for the ancient Egyptians. The Islamic and Jewish dual calendrical systems still used today are perfect modern counterparts.

[17] The key date for the Twelfth Dynasty is the reign of Sesostris III; the Illahun archives record a heliacal rising of Sirius in his seventh regnal year. The current estimates for this reign are 1862-1843 BCE (Kitchen 1989:153) and 1872-1854 BCE (Luft 1992:228), both incorporating the now acknowledged shorter reign of Sesostris III, nineteen rather than thirty-six+ years. It is to Parker's credit that his date of 1878–1843 BCE (Parker 1950:69) is about the same except that he allowed for a thirty-six year reign. It is ironic that with Luft's very detailed examination of the evidence, much of it unknown to Parker, the debate has swung full circle and that most of it has proven unnecessary.

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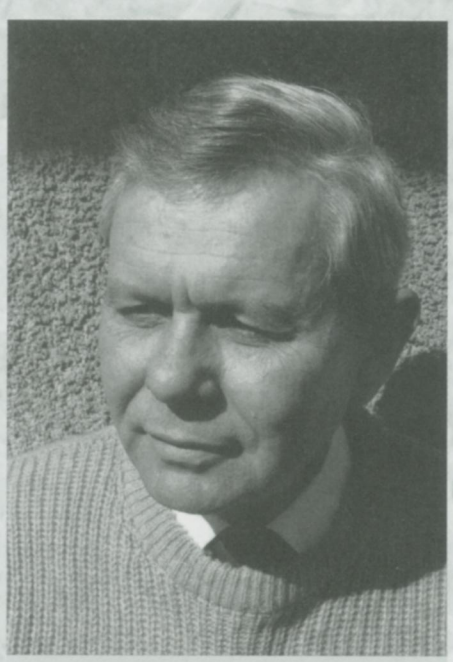

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