

Sasanian Sealstones : an Electronic Cataloging Project

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The Department of Near Eastern Studies, the University of California, at Berkeley, has housed, for more than a decade, a unique collection of some thousand ancient sealstones. This collection was donated to the University in 1986, by the late Edward Gans (1887-1991), whose expressed wish was to have the seals cataloged for the benefit of the specialists, the student and the general public. The present project, undertaken by faculty and graduate students from Near Eastern Studies, seeks to fulfill that wish by offering, as the first volume of the Gans seal catalog, some 400 specimens from the ancient Near East, datable to the first millennium, specifically from the period of the Sasanian empire, from AD 224-642.

The Sasanian empire was the creation of the last great Iranian monarchy before the Arab conquest of Western Asia in the seventh century. The Sasanians are best remembered for their distinctive cultural expressions, and for the longevity of their more than four centuries of rule. The Sasanian age was a dynamic time of cultural and economic revival, when a new Persian ruling house in southwestern Iran, like the Achaemenid Persians of a thousand years before, extended its dominion over much of Western and Central Asia, in territories that stretched from Transcaucasia to the Indus. The Sasanian age was also a time of intensified trade and exchange, when Iran served as a major gateway to the transcontinental Silk Road that linked the West with China and the Far East.

The sealstone is a widespread and prevalent cultural relic of the Sasanian age, when it functioned as a guarantee of a sealed object or document in commercial and administrative transactions. Archaeological evidence of the use of the seal is preserved in ancient clay impressions found on Sasanian written documents and traded goods. Contracts and goods, were tagged with wet lumps of clay impressed with the owner's seal as voucher. The clay tag was originally attached to strings that once wrapped the letter or covered goods. The clay seal impression was to be broken and discarded only at the time of the use of the sealed article.

Sasanian seals were shaped as stamp seals, in the form of stones mounted on

metal rings, stone rings, or as perforated beads of various shapes, represented by domes, ellipsoids and conoids. Sasanian seal shapes differ from the more ancient Near Eastern cylinder seals, but they resemble a small group of ring- bezels of a type found, among Roman seals of the third and fourth centuries.

The pictorial decoration on the face of the Sasanian seal is carved in intaglio, that is, the carving is depressed below the surface of the stone, so as to leave an impression in relief. The pictorial composition on the Sasanian seal on the round or oval face of the sealstone is sometimes surrounded with an ornamental border or an inscription. The rich and varied motifs found on Sasanian seals, a reflection of the cultural and religious traditions of Iran and Mesopotamia in Sasanian times, are only indirectly explained by the inscriptions that sometimes accompany them.

By far the largest group of Sasanian seals are made from semi-precious stones, largely quartzes, such as rock crystal, carnelian, jasper, onyx, and agate. A smaller number are manufactured from other silicates, such as garnet, lapis lazuli and jadeite, and fewer are made from bronze and glass.

The decorated face of the majority of Sasanian seals shows figures of humans, animals, and plants. Human figures are shown singly or in compositions, and as busts represented frontally or in profile. The classification of seals in our catalog is based on the pictorial theme carved on the seal face. Although the notion of theme may be devoid of any particular significance, nevertheless, it is a useful and effective means for a comprehensive classification of all Sasanian seal specimens.

These seals are particularly well suited for electronic publication because of the limited range of their shapes and pictorial decoration. Thus the model chosen for the present publication may be readily adopted for the documentation of other Sasanian seals, and for the electronic publication of other such collections.

Each seal in the present catalog is assigned an Inventory Number determined by the subject matter of its carved decoration. The Inventory Number has three components that encode information about the seal's decoration. These are an Arabic numeral, followed by a letter from the alphabet, and then by another Arabic numeral. The first numeral identifies large categories or series of motifs and pictorial themes. For example, series 10, describes images of humans, series 30, treats animals, and series 50 refers to plants.

The second component of the Inventory Number, the letter from the alphabet, identifies a specific motif within a given series, such as the gender in humans, or the species of an animal or a plant. The third and last component of the Inventory Number, is another numeral that identifies the motif in even greater detail, such as posture and gesture of the image. Thus, for example, Inventory Number 10.A.1 identifies a human figure, which is female, and is shown in a standing posture, and Inventory Number 40.A.20 refers to a fantastic animal, specifically a winged horse, shown walking to right..

An early model for this glyptic coding system was first devised by Francoise Digard et al., in France, and published in 1975 ¹. The excessive complexity and inconsistent graphics of Digard's pioneering study, for which it was sharply criticized, are explained by that study's broad coverage and by the inadequacies of computer technology at the time of its preparation. Although the computerized study of ancient Near Eastern seals was discontinued after 1975, a simplified version of its glyptic coding system was adopted by Rika Gyselen, a Director at the National Center for Scientific Research, in Paris, in her hard-cover publications of several collections of Sasanian seals². The present catalog, which is indebted to Gyselen's glyptic coding system, will be the first electronic publication of Sasanian seals. This is made possible through advances in computer technology and through the use of digital imaging of seal impressions. Catherine Bullock-Demos, our Technical Assistant, is responsible for developing the computer generated graphics as components of catalog entries.

The database for the present volume contains information not only about the seal's pictorial theme or motif, but also about its shape, material of manufacture, iconography and inscription. This database has the potential for much creative manipulation of information, and may be used to provide answers to questions about a seal's commercial use, its socio-religious significance, its date, and its specific provenance. For example, we know that seals of important Sasanian officials were made of the more valuable and attractive stones, such as carnelian or amethyst, which were fitted on metal rings. The carved design on these rings generally shows the

¹ F. Digard, et al.. *Repertoire analytique des cylindres orientaux I-III*, Centre National de la Recherche Scientifique, Paris 1975. Some 4,600 cylinder seals from the ancient Near East are used here for the creation of a glyptic coding system and a database, accompanied with over 4,700 index cards with hand-drawn illustrations or photographs of seal impressions, and a reel of computer magnetic tape. For a critical review of this work, see E. Porada, "Problems of Method in the Archaeology and Art History of the Ancient Near East," *JAOS* 102.3, pp. 501-506.

² Philippe Gignoux, Rika Gyselen, *Catalogue des sceaux, camees et bulles Sasanides de la Bibliotheque Nationale et du Musee du Louvre II*, Paris 1978; Philippe Gignoux, Rika Gyselen, *Sceaux sasanides de diverses collections privee*, Leuven 1982; Rika Gyselen, *Catalogue des sceaux, camees et bulles Sasanides I*, Paris 1993.

profile bust of the owner, generally inscribed with his name and title. The database may thus be tapped for information on the correlation between seal type and the gender, social rank, and religious beliefs of seal owners. It is hoped that the pool of information provided in the present database may be expanded through adoption of Rika Gyselen's simplified glyptic coding system in future electronic publications of other Sasanian seal collections.

We expect to apply the approach adopted in this volume to subsequent electronic publications of the remainder of the Cans seals from other regions and time periods. These are represented by specimens from the earlier civilizations of the ancient Near East and Egypt, from the Graeco-Roman world and Europe and from China and the Far East, from India and Southeast Asia, and from the New World.

In conclusion, I wish thank the following individuals for their contributions to the present project. Dr. Sanjyot Mehendale, of the Department of Near Eastern Studies, at Berkeley, who originally prepared the Inventory Numbers and the glyptic coding system used in our catalog entries, and Catherine Bullock-Demos, a graduate student in the same department, who as Technical Assistant to the project, is responsible for the preparation of digital images of seals as an integral part of catalog entries. I am especially grateful to Professor Lewis Lancaster, director of the Electronic Cultural Atlas Initiative, at Berkeley, for his interest and collaboration toward the realization of the electronic publication project described in this report.

