

Adornment

Jewelry and Body Decoration in Prehistoric Times



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Edited by

Ahiad Ovadia



The Israel Museum, Jerusalem

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Adornment: Jewelry and Body Decoration in Prehistoric Times

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Front cover: Reconstructed strand of bone and shell pendants,
El Wad Cave, Natufian culture, ca. 15,000 years ago
IAA 1936-1716, on exhibition at the Rockefeller Museum
Back cover and flaps: Jewelry from various local prehistoric
sites. Israel Antiquities Authority

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Foreword

Adornment: Jewelry and Body Decoration in Prehistoric Times is the latest in a long line of Israel Museum exhibitions mounted by the Department of Prehistoric Cultures, which have afforded the Israeli public a closer look at humanity's distant past. When the Israel Museum opened its doors in 1965, visitors were greeted at the entrance to the Archaeology Wing with a breathtaking display of treasures from the prehistoric land of Israel, where human beings took their first steps out of Africa. As the years went by, this display was complemented with new and fascinating finds from local excavations, which continued to shed light on the rich story of early mankind. In 2005 the Museum mounted *In the Beginning: Prehistory and the Origins of Myth*, a groundbreaking show devoted to the beginning of cult and religion in our region. This was followed in 2014 by another innovative exhibition, *Face to Face: The Oldest Masks in the World*, which examined an intriguing expression of ancestor worship that emerged at the time of the agricultural revolution. Today, the Israel Museum is proud to present the first exhibition devoted to the universal human phenomenon of body adornment, the origins of which lie in prehistoric times. It examines when and why people began to adorn themselves and the significance of different types of adornment, displaying finds from archaeological excavations in Israel never presented to the public before alongside ethnographic material from the Israel Museum's Department of Oceania and Africa. In this sense, the exhibition underscores the unique position of the Israel Museum as the primary showcase for the archaeology of Israel, as well as a universal institution with rich, comprehensive collections of its own.

We are deeply indebted to the Israel Antiquities Authority and the archaeologists who have allowed us to display important finds from their excavations alongside the many precious items already on permanent loan to the Israel Museum. In addition, we express our sincere gratitude to the William Davidson Foundation, Detroit, for its generous support of the exhibition and its accompanying catalogue.

Last but not least, we thank Ahiad Ovadia, Ilse Katz Leibholz Curator of Prehistoric Cultures, for his outstanding debut exhibition; we look forward

to many more fruitful curatorial undertakings by him in the future. We also thank Ido Bruno, my predecessor as Israel Museum Director, for promoting this important exhibition; Haim Gitler, Tamar and Teddy Kollek Chief Curator of Archaeology, for supporting and encouraging Ahiad; and the many members of the Israel Museum staff who dedicated themselves to the exhibition's success.

Denis Weil

Anne and Jerome Fisher Director

Preface

This catalogue accompanies the exhibition *Adornment: Jewelry and Body Decoration in Prehistoric Times*. It is devoted to the complex subject of *identity* (personal and social) in human prehistory, as expressed through ornaments and jewelry. The first article, by curator Ahiad Ovadia, is a detailed overview of adornment phenomena in prehistory, with special attention paid to the material presented in the exhibition. The second article, by Daniella Bar-Yosef Mayer, summarizes the relevant data for the prehistoric Levant in an attempt to tackle the thorny issue of identifying social-cum-ethnic characteristics of past societies. Finally, Polly Wiessner's contribution provides a discourse on the "messages" embedded in the personal adornment of present-day hunter-gatherers and horticulturalists. The catalogue is further enriched by brief entries on specific topics, as well as an original short story by Israeli author Dror Burstein.

In the animal kingdom, humans are but one of many species drawn to shiny objects and curiosities and who like to decorate their bodies. Bearded vultures, for example, rub themselves in iron-rich soil or bodies of water containing iron-oxide in order to take on an orange hue (at least this is one of the explanations for their unique behavior). These traits are especially common among various species of birds, mainly Corvids (e.g., blue jays and magpies), raccoons, and some of our own family, the primates. Yet, it appears that humans are the only species – as far as we can tell – to have become cognitively aware of their own instinctive attraction to shiny baubles and love of decoration, and to have harnessed these traits consciously for the sake of their own social needs and demands.

Though there are rare instances of animals using extra-corporeal "decorative" elements to attract mating partners (e.g., the bowers or courts filled with brightly colored objects, built by male bowerbirds), it appears that personal adornment plays a much greater role in the lives of humans, being relevant to a wide spectrum of human socio-cultural domains. The archaeological record indicates that decorative elements took on additional meanings and value besides those relating to their visually pleasing qualities quite early on – even before the appearance of modern humans, the *Homo sapiens*. Ornaments came to signify personal and social status, as well as inter-and intra-group affiliation.

All of the “ingredients” used in the creation of a given ornament play a part in its embedded “message”: its raw materials, cheap or precious; its simplicity or elaborateness; the time invested in making it; and the mastery needed to create it. In each and every human society, starting in the deep past and until the very current present, ornaments and jewelry serve as signifiers of nearly every aspect of existence: wedding rings (marital status), pendants in the shape of a cross or Star of David (religious affiliation), mourning jewelry, such as hair lockets (personal situation), and in some cases even jewelry indicating climatic or occupational seasonality.

To be sure, we cannot decipher the precise meanings of the various forms of personal ornamentation of the distant past. Nevertheless, based on the characteristics of these items and their context, together with insights from ethnographic studies, we can at least try to guess their significance. Judging from the material presented in this catalogue, what an exhilarating and thought-provoking journey into our own past it is!

Anna Belfer-Cohen

The Hebrew University of Jerusalem

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The exhibition *Adornment: Jewelry and Body Decoration in Prehistoric Times* and its accompanying catalogue are the result of the extensive research and efforts of many individuals. First and foremost, I am indebted to Anna Belfer-Cohen and Daniella E. Bar-Yosef Mayer, the academic advisors of the project, who generously shared their knowledge and experience, allowed us to present their research and display jewelry from their excavations, and wrote parts of this catalogue.

I thank Ido Bruno, former director of the Israel Museum, who backed the exhibition from the very beginning, and Israel Museum director Denis Weil, who has supported it whole-heartedly since his first encounter with the topic, even before his tenure began. I am also grateful to Haim Gitler, Chief Curator of Archaeology, who has stood by my side all along the way, providing sage advice and calm encouragement. Special thanks are also due to Debby Hershman, Deputy Director of the Eretz Israel Museum, Tel Aviv, and former Curator of Prehistoric Cultures at the Israel Museum, for her support and helpful suggestions, and for the outstanding collection she left in my care.

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I am indebted to my fellow curators at the Israel Museum, Yael Eshel, Nurith Goshen, and Fawzi Ibrahim, who generously contributed objects from their

departments to the exhibition, enriching and completing the display. Thanks are also due to Dov Avigad, Uri Ryb, and Yael Ebert of the Institute of Earth Sciences, The Hebrew University of Jerusalem, who assisted with the challenging identification of the stone used in the Newe Yam pendant; and to Yuval Goren, Ben-Gurion University of the Negev, who also examined this object.

My deepest appreciation is extended to Polly Wiessner, who agreed to write a chapter for the exhibition catalogue on the use of jewelry in two tribal societies geographically distant from one another; and to Dror Burstein, who wrote a touching story inspired by the Newe Yam pendant.

The designer of the exhibition, Tal Gur, took our vision and succeeded in giving it a distinctive and inspired form; I thank him deeply for the impressive treatment of the gallery, in which each item, not matter how small, received its proper place. I am also grateful to Keren & Golan, for the attractive exhibition graphics. Finally, I am indebted to Magen and Adam Halutz, for their skillful and meticulous design of the catalogue; and translators-editors Nancy Benovitz, Yosef Kuris, and Revital Mazover, who played a key role in bringing the exhibition and its catalogue to fruition. Last but not least, I thank Ada Gansach for the beautiful reconstructions of the shells from Qafzeh Cave; photographers Yehuda Sameach and Moshe Shai; the members of the Bnei Adama organization, Micha Hanuna, Ron Kehati, and Linoya Sudri-Maccabi, for their fun-loving and yet highly instructive attempts to reconstruct early manufacturing techniques; and Amir Ronen, who cheerfully endured the challenging weather and documented these techniques in an outstanding film.

I am tremendously grateful to the many members of the Israel Museum staff, who helped realize the vision of this exhibition: Yael Bamberger, Head of Publications, and Yael Diner; the Wing for Exhibition and Collection Support, especially Liat Benzguida Baruch, Acting Department Head, and Anat Weiss; Yael Barschsk, Head of Image Resources and Copyright Management, and Nili Luria; Michal Aldor, Head of Exhibition Design, and Sara Gal; Henk van Doornik, Head of Shipping and Loans, and Tal Elispur; Allison Kupietzky, Head of Collections Database, and Gallia Hoz; Elie Posner, Head of Photography, Ofrit Rosenberg, Laura Lachman, and Zohar Shemesh,

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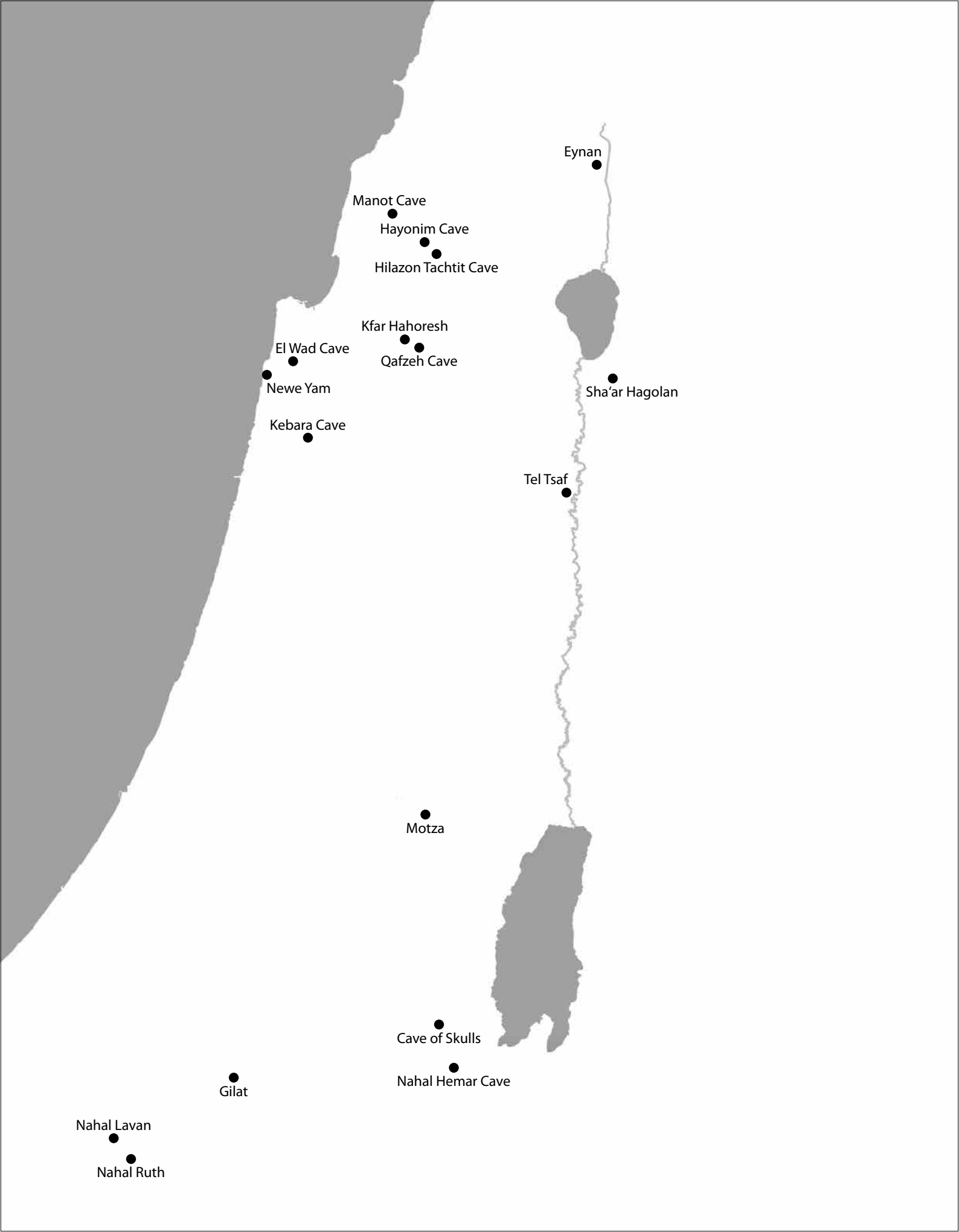
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To all of the above, my heartfelt gratitude.

Ahiad Ovadia

Ilse Katz Leibholz Curator of Prehistoric Cultures

Opposite: The main archaeological sites mentioned in the catalogue



Eynan

Manot Cave

Hayonim Cave

Hilazon Tachtit Cave

Kfar Hahoresh

El Wad Cave

Qafzeh Cave

Newe Yam

Sha'ar Hagolan

Kebara Cave

Tel Tsaf

Motza

Cave of Skulls

Nahal Hemar Cave

Gilat

Nahal Lavan

Nahal Ruth

Adornment in Prehistory

Ahiad Ovadia

Jewelry and body decorations are not just about appearances. They also often have special meaning, just like wedding rings, an heirloom bracelet, a necklace purchased on a trip, a tattoo with the names of one's children, and so forth. To be sure, these are all modern examples; but, in fact, wearing jewelry, painting and tattooing the body, and decorating clothing have been attested in practically every human society as far back as prehistoric times, and it would appear that the phenomenon of adornment reflects a universal human need. Though in the prehistoric periods, some ornaments may have been reserved for use on special occasions, most seem to have worn on a regular basis to convey complex, non-verbal messages and serve as a primary means of self-definition. Indeed, some scholars, addressing the role of adornment in prehistoric as well as contemporary tribal societies, regard ornaments as extensions of their owners – even their owners' bodies¹ – or as a means of group-definition oriented toward those outside the group.

The term “jewelry” refers to beads, pendants, bracelets and necklaces, anklets, earrings, finger rings, and so on. The aesthetic aspects of these items – their eye-catching colors and shapes – obviously played an important role from the very beginning; but our focus in this chapter is primarily on the meanings these objects bore. Apart from being a means of forging individual and group identity (inclusive or exclusive), jewelry served in prehistory as a means of attracting members of the opposite sex, as protective amulets, and as indications of gender, age, social status, or particular achievements; occasionally, a number of these factors were at play simultaneously. The use of symbolic language also attests to the size and complexity of human groups in early periods, for there is no real need to adorn oneself when one is surrounded by a limited group of individuals (such as family members). However, adornment has great meaning

1 Malafouris 2008.

when one comes into contact with “others” with whom one shares a particular subsistence area.² Above all, the fact that in prehistoric times people wore objects on their bodies and painted their skin attests to cognitive abilities that allow for the distinction between two states – “us” and “them”; and the development of meaningful symbols (an ability which to the best of our knowledge is unique to humans)³ points to the emergence of human self-awareness.

For example, for tens of thousands of years, shells were a central component of adornment, as demonstrated by the shells from Qafzeh Cave – the earliest suspended jewelry ever found in Israel, and the second oldest known to date worldwide (see pp. 32–33).⁴ The use of such shells is hardly surprising, as all that was necessary to do in order to wear them was to tie them onto a string; indeed, shell beads have come to light at hundreds of prehistoric sites the world over.⁵

Little is known about human adornment in prehistoric times. This is not only because of the “silent” nature of the finds, but also because many ornaments, such as tattoos and items made of organic materials, have not survived, and thus our picture is only a partial one. One way to shed light on the situation is through comparisons with the lives of contemporary hunter-gatherers. This approach must be employed with the utmost caution, since modern hunter-gatherer groups have been in varying degrees of contact with “advanced” agricultural societies for hundreds of years and thus do not live in complete isolation. Nevertheless, the comparison helps us interpret, or at least provide a reasonable explanation for, the use of jewelry and body decoration in the prehistoric world. In contemporary tribal societies, items of adornment

2 Belfer-Cohen and Hovers 2020.

3 Kuhn and Stiner 2007.

4 Sehasseh et al. 2021.

5 Dubin 2009.

serve as protective amulets in the personal and public cult; symbolize one's membership in a social group or sub-group (see pp. 42–43); and indicate one's stage in life, gender, and intra- and intertribal social status (see pp. 44–45). The particular features of these objects – type, color, number of components – also provide information about the owners.⁶

The identities inherent in prehistoric jewelry and body decorations – these are our chief interest. The ability to connect, if only for a brief moment, with people of the distant past via their personal belongings brings us that much closer to understanding their lifeways, beliefs, and thoughts. Classification according to the types of identity expressed by various ornaments would not have been something that the prehistoric wearers of the jewelry would have been aware of – they probably lumped them all together – but we have done so in this catalogue in order to delve more deeply into their world.

Personal Identity

The term “jewelry” refers to personal items that one wears on the body, and which are also sometimes valuable and meaningful. In the field of archaeology, particularly in prehistoric research, it is practically impossible to point to exterior signs that designate individual men or women within a group, particularly within egalitarian, non-hierarchical societies like the prehistoric societies of our region. Nevertheless, it is possible that certain items of jewelry that seem to be unusual or unique designated, or were used in the past by, special individuals within the group.

A fine example of this can be seen in a burial attributed to the Early Natufian culture (around 15,000 years ago), excavated in Hayonim Cave; the burial contained the remains of a young woman with a strand of 52 bone pendants arranged in pairs around her hips (see pp. 34–35). She seems to have worn this ornament during her lifetime; the shape of the pendants and the way they are tied indicate that they would have made a rattling sound when she walked, especially when she danced.⁷ Only one other burial in that cave yielded a similar strand. Music and sound are common components of everyday life and ceremony among traditional societies, and the bead strand may indicate

6 See the chapter by Wiessner (pp. 70–83) and the entry on the chest pendant (pp. 44–45).

7 Shaham and Belfer-Cohen 2017.

that this phenomenon already began in Natufian times. The interred woman had apparently been pregnant when she died, or shortly after delivery, since the bones of an infant or fetus were interred with her. Perhaps the bead strand and the sounds it made was a kind of amulet intended to protect her at the precarious moment of childbirth. Another example of a special item of jewelry was discovered in the burial of an elderly woman at the cultic site of Kfar Hahores, dated to the Pre-Pottery Neolithic B period (around 10,000 years ago). On the head of the woman was a large pendant made of mother-of-pearl that originated in the Red Sea. The pendant is rounded, and its upper part has small perforations for suspension. The woman apparently wore this pendant during her lifetime, and it suggests that she had an elevated social or economic status in her society – this was the height of the agricultural revolution, when the first signs of social stratification appear. Another special item is a human-shaped pendant-figurine (see pp. 36–37). Made of stone, it was discovered along the shore of Newe Yam, an underwater site from around 7,500 years ago, where a village of farmers-fishermen belonging to the Wadi Rabah culture once stood. The figurine, which does not resemble any other find from that period, was worn on the neck of a man or woman, as the perforations that can be seen in the back indicate. Chemical analysis indicated that the raw material used for making the figurine originated in



Mother-of-pearl pendant

Kfar Hahores, Pre-Pottery Neolithic B, ca. 10,000–8,000 years ago

L 8 cm, W 6.8 cm | IAA 2021-2139

present-day western Turkey or Cyprus. It is possible that the figurine served as a protective amulet or as a commemorative object. Its form – the head is rather large in proportion to the body and limbs – is reminiscent of that of a child or even an infant, and it is thus tempting to link it to the infant burial that was discovered not far away, at a spot that was once a *kurkar* (a type of coastal rock) hill, but which is now a tiny island protruding just above sea-level at Newe Yam. The uniqueness of the figurine, the effort required to produce it, and the fact that its raw material came from afar indicate that it was a valuable personal possession.

Group Identity

One of the earliest and most interesting examples of jewelry attesting to group identity belongs to the Levantine Aurignacian culture from around 35,000 years ago. The material culture of the Levantine Aurignacians is remarkably similar to that of their fellow Aurignacians in western Europe. Both produced similar bone and flint tools, and it is interesting that even their adornment traditions were similar. The local Aurignacians adorned themselves with deer teeth that had been perforated at their roots, a practice hitherto unknown in our region, but which was widespread in Europe. They also gathered Mediterranean shells that were not collected by the other local cultures (such as the Ahmarians), but which were identical to the shells used during that period in Europe. This may therefore be the earliest evidence for the migration of groups of hunter-gatherers from western Europe to our region, who brought with them the adornment traditions and material culture of their land of origin. Another example is associated with the Early Natufian culture, which flourished in our region between 13,500 and 15,000 years ago. The Natufians were the first people in the world to dwell in permanent stone structures, and their ornamental repertoire was particularly rich. They adorned themselves with various types of shells, especially *Dentalium* shells, and made beads and pendants, mainly of bone and, for the first time, stone. The three main Natufian sites in our region that have been excavated so far are El Wad Cave on the Carmel mountain range, Hayonim Cave in the Galilee, and Eynan in the Hula Valley. The material culture discovered at all three sites is essentially the same – the people inhabiting these sites all produced the same flint, stone, and bone tools, hunted the same animals, and buried their dead in the same manner. But the main shapes of the bone pendants and beads differ from site to site. At El Wad Cave, a special



Pendants made of animal teeth

Manot and Hayonim Caves, Levantine Aurignacian culture, 37,000–33,000 years ago

L 2.1–4 cm | IAA



Bone pendants and beads of different types

Hayonim Cave, Eynan, and El Wad Cave, Natufian culture, ca. 15,000–11,700 years ago

L 1.1–3.7 cm | IAA

type of double or “twin” bone pendant (as it was first called by the excavators in the 1930s) was found.⁸ At Hayonim Cave, drop-shaped bone pendants are the primary type. Finally, at Eynan, the predominant type was beads made from the toe bones of deer. Each type was found at its respective site in large quantities, but few examples – if any – of the other two types were present at all. This may indicate that the people living at the different sites had developed separate group identities, which they displayed by means of the jewelry they wore and with which they were sometimes even buried.

Identity after Death

The importance of jewelry in prehistoric societies finds expression in the fact that jewelry was also buried along with the deceased. This may perhaps be explained by comparison with contemporary hunter-gatherer societies, which suggests that prehistoric societies were animistic, in other words, that they believed that everything in nature – stones, trees, animals – has a soul, mind, and will of its own, as well as a role in the fabric of life. Death was not perceived as the end of life, but rather as an additional stage of life. For that reason, it was only fitting that the jewelry one wore during one’s lifetime should accompany one on to the next stage. Indeed, in many burials, skeletons were found interred with jewelry. For instance, in an Early Natufian burial excavated at Hayonim Cave (see pp. 38–39), a strand of fox teeth was found around the interred’s pelvis, while more than three hundred *Dentalium* shells were found near the neck and chest – these were in all likelihood part of an elaborate necklace or garment decoration.⁹ The burial, one of the most richly endowed in the entire cave, reflects the importance of jewelry in the lives and deaths of the Natufians. And it is not the only one: male and female skeletons buried with complex strands of *Dentalium* shells as well as numerous bone pendants were unearthed in the early 1930s at El Wad Cave (see pp. 40–41). Additional skeletons were discovered at Eynan, including that of an infant wearing a strand – or belt – of *Dentalium* shells (see p. 22). It is tempting to attribute an elevated social status to these individuals, perhaps an early form of royalty; but to the best of our knowledge, Natufian society was essentially egalitarian, and so another explanation must be sought. Since these were personal ornaments, it is

8 Garrod and Bate 1937.

9 Belfer-Cohen 1988.



Burial of an infant with a strand of *Dentalium* shells

Eynan, Natufian culture, ca. 15,000–11,700 years ago

L 54 cm, W 39 cm | IAA 2012-178, on loan from the
Upper Galilee Museum of Prehistory, Ma'ayan Barukh

possible that the interred requested to be buried with them; as for the decorated infant from Eynan, who would have been incapable of such a request, perhaps the strand was a kind of parting gift or a personal gesture from the child's grief-stricken parents, unrelated to the family's social status.

Tattoos, Body Painting, and Other Decorations

Another aspect of the topic of adornment is body- and hair-painting, tattooing, intentional scarring, and the use of ornaments made from perishable materials. All of these are widespread in contemporary tribal societies, and especially in the case of permanent decorations, they often involve pain; the latter are usually particularly important to their owners and associated with rites of passage and initiation.¹⁰ Needless to say, very little is known about such decorations from archaeological excavations, and direct evidence is only rarely encountered. A famous example of ancient tattooing was found on the body of Ötzi the Iceman, a man who lived around 5,000 years ago in present-day northern Italy, and whose body was naturally mummified in ice. Ötzi, named for the valley in which he was found, was around 45 years old at his death and



Medical tattoos on the skin of Ötzi the Iceman
Italian-Austrian border, ca. 5,000 years ago
South Tyrol Museum of Archaeology, Bolzano, Italy

10 For a detailed explanation of the practice of tattooing throughout the world, see Bergner 2016.

suffered from, among other things, joint pain. His 61 tattoos were created by making small incisions in the skin and rubbing charcoal into them. Considering the placement of the tattoos over the ribs and joints, scholars have concluded that the tattoos were meant for healing purposes. This example points to the importance of tattooing and body painting among prehistoric societies: just as a piece of jewelry may have apotropaic power, so too may body tattoos. In our region, the possibility of discovering naturally mummified prehistoric human remains is exceedingly slim, and thus scholars must rely on indirect evidence for painting and tattooing. Ochre, a natural red mineral, was used for painting the body and clothing and was associated with ritual.¹¹ Evidence for the symbolic use of color has been discovered at many prehistoric sites, including lumps of ochre and red pigment on shells used for jewelry at Qafzeh Cave, around 120,000 years ago.¹² Some of the famous fertility figurines attributed to the Yarmukian culture (around 8,000 years ago) are carefully decorated with red lines or areas, and some are incised on the their hands and legs. It is possible that these represented tattooing and intentional scarring practiced at the time in this society, and which found expression in the figurines. It is also noteworthy that some of the figurines have prominent circles near the ears that look like earrings. Another special figurine depicts a woman carrying a kind of churn on her head (see p. 26). It was found in the temple at Gilat in the western Negev and has been attributed to the Ghassulian culture (around 6,000 years ago). The figurine's body is carefully decorated with red lines, which may have represented the kind of tattoos used at the time. Another example is a stone mask from Nahal Hemar Cave, part of a cache of rare, ceremonial objects from around 10,000 years ago, which included many organic items preserved due to the dry conditions of the Judean Desert (see p. 27). The mask bears radial lines of different colors painted using various materials; this decoration may have corresponded to the type of face painting practiced at the time.

The use of feathers represents another form of adornment, but one for which virtually no tangible prehistoric evidence remains. In Qesem Cave, where habitation layers dating from around 420,000 to 200,000 years ago have been discovered, the wing bone of a swan was unearthed; based on the marks

11 Rifkin 2015.

12 Hovers et al. 2003.



Clay figurines of females wearing earrings and decorated with pigment and incisions

Sha'ar Hagolan and Munhata, Yarmukian culture, ca. 8,400–7,700 years ago

L 6–15 cm, W 4–7 cm | IAA 1992-1205, 2002-1188, 1999-657



Clay vessel in the shape of a woman carrying a churn

Gilat, Ghassulian culture, ca. 6,500–5,800 years ago

L 30 cm, W 14.5 cm | IAA 1976-54



Painted stone mask

Nahal Hemar Cave, Pre-Pottery Neolithic B, ca. 10,000–8,000 years ago

L 26.5 cm, W 17.2 cm | IAA 1984-407

on the bone, it is clear that the wing was carefully detached from the body so that the wing with all its feathers would remain intact. Scholars believe that this find points to the use of the feathers of this large and impressive bird for adornment, perhaps even adornment of a ceremonial nature.¹³ Clearer evidence for the use of feathers in ritual activities has been found in the Shaman's Burial at Hilazon Tachtit Cave, from around 12,000 years ago. The interred, a woman approximately 45 years old, was surrounded by exceptional grave goods, including more than eighty tortoise shells, two marten skulls, the horncore of a deer, and bones from the pelvis of a leopard, the tail of an aurochs, the leg of a wild boar, and a human foot. Above these were bones from the wing of a golden eagle – one of the largest local birds of prey; specifically, the bones are from the tip of the wing, the enormous feathers of which would have originally covered practically the entire burial. It is possible that these burial objects, including the eagle wing, were used by the woman during her lifetime for magic and ritual – a practice employed by shamans and medicine men in contemporary tribal societies.¹⁴ Alternatively, the wing may have been part of complex burial rites performed on the woman's behalf.¹⁵

Manufacture – Varied Technologies and Impressive Achievements

Sharp flint flakes were used by the first jewelry-makers to perforate shells, ostrich eggshells, and even soft stones so that they could be threaded onto strings. A tool referred to as a “drill” – an object the working edge of which has two parallel facets – was first used in our region during the Upper Paleolithic period (around 35,000 years ago), as attested by perforated animal teeth and shells found at sites of the Levantine Aurignacian culture. Drills were widely used toward the end of the Stone Age, at sites belonging to the Natufian culture, where, as mentioned above, a great deal of conch, shell, and bone jewelry came to light. While till this day, no complete drill along with its wooden handle and string mechanism has been found, the assumption is that the Natufian jewelry-makers had access to complex tools, such as bow drills and pump drills (see p. 30). During the Neolithic period, the technology of drilling became more sophisticated; jewelry was made of hard stones,

13 Blasco et al. 2019.

14 Grosman et al. 2008.

15 Grosman and Munro 2016.



Flint drills and awls

Eynan, Nahal Oren, and Sha'ar Hagolan, Natufian and Yarmukian cultures, ca. 15,000–8,000 years ago

L 1.2–7.7 cm | IAA

**Reconstructed drills**

Flint (original), wood and rope (contemporary)

L 10.5–34 cm, W 0.6–25.5 cm | Gift of Felix Burian and

Erich Friedman, Tel Aviv | IMJ 87.136.139, 140, 142

such as carnelian, which had very small perforations, attesting to advanced technological means. In contrast to Africa, where beads made from ostrich eggshell have come to light as far back as 40,000 years ago,¹⁶ mass-production of ostrich eggshell beads in this region can only be traced to the Neolithic period. Reconstruction of the manufacturing process was based on examination of both industrial waste and the beads themselves, such as those found at Nahal Lavan 109 in the western Negev. The process consisted of several stages, which resulted in beads that were of a uniform diameter, and which were used for decorating the body or clothing.¹⁷

Though jewelry is silent, and despite the fact that a large portion of prehistoric jewelry was made of perishable materials that have not survived, scholars have managed to glean a great deal of information about the role of adornment in human life. As we have seen, they rely not only on the archaeological remains, but also on comparisons with contemporary traditional societies. In this way, ancient finds, many of which have been discovered in burials, speak to us from the past, relaying secrets about gender and status, group affiliation, ceremonies, social life, and even death – an integral part of the life cycle.



Complete and unfinished ostrich eggshell beads

Nahal Lavan, Pre-Pottery Neolithic B, ca. 10,000–8,000 years ago

L 1.5 cm, W 0.7 cm | IAA

¹⁶ Miller and Willoughby 2014.

¹⁷ For a detailed description of the process, see the entry on the bead from Nahal Ruth (pp. 84–85).

The Oldest Jewelry outside Africa

Qafzeh Cave, Mousterian culture, ca. 120,000 years ago, shell

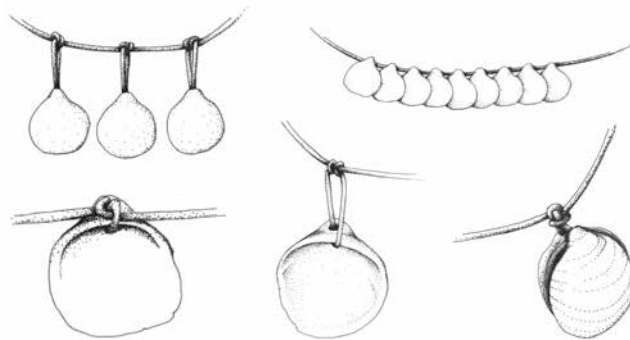
L 3.2–4 cm, W 1.2–1.5 cm

IAA 2011-1526–1530

Microscopic signs of wear running vertically along the natural apertures of five *Glycymeris nummaria* shells discovered in Qafzeh Cave indicate that the shells were suspended from a plant-based string. The shells, along with another five complete shells and a number of fragments, were found in the cave in layers dated to ca. 120,000 years ago. All of the intact or almost intact shells were found inside the cave, directly below burials of *Homo sapiens*; they may have played a role in burial rites conducted at the site. Some of the shells show signs of having been smoothed around their circumferences, revealing that they had continually rubbed against other shells. Four shells bear traces of red pigment; the pigmented areas are lightly scratched, suggesting that pigment on the skin or clothing of the wearer accidentally stained the shells when they were worn.

The five *Glycymeris* shells bearing signs of suspension are the earliest evidence outside Africa known to date for the use of hanging jewelry or clothing decoration. The very fact that the shells were transported kilometers from the coast to the cave – whether directly or via trade – so that they could be proudly displayed on the body as a piece of jewelry points to the importance of adornment already at this early stage and to the cognitive and social capabilities of modern humans.

Ahiad Ovadia



Reconstructions of the ways the shells may have been tied,
based on signs of wear



Belt

Hayonim Cave, Natufian culture, ca. 14,500 years ago, bone

Pendants: L 2–3 cm, W 1–2 cm

IAA 1982-75/1–18; 2021-2181–2221

In a burial excavated in Hayonim Cave, the skeleton of a young woman, who was approximately 16–19 years old at her death, was found with 52 bone pendants arranged in pairs around her pelvis. The pendants had originally been tied in a strand that had been fastened around her hips. The remains of a man approximately 20–25 years old were also unearthed in the grave; both the man and the woman were in a supine position, her arms resting on top of him. At their feet lay the remains of a child around 8 years old. Near the skeleton of the woman, several bones of a fetus or infant were discovered, suggesting that she had been pregnant or shortly after delivery when she was buried. This seems to have been family burial.

Drop-shaped bone pendants were produced by breaking the limb bones of gazelle lengthwise and cutting them into 2–3 cm long segments. The segments were carefully polished, and a single perforation was created in each by drilling. One side of the bone was polished and flattened, the other was left curved. When the pendants were tied together they formed a decorative strand, which would rattle when the pendants knocked against one another. It is possible that the musical aspect of the strand had magical or ceremonial significance; indeed, music-making implements and jewelry are frequently used in spiritual and life-cycle rites among traditional societies.¹ Drop-shaped pendants are a characteristic feature of the Hayonim Cave jewelry assemblage; hundreds of such pendants have come to light there, while other Natufian sites have yielded few, if any, examples of this type. This distinction, together with other differences between the types of jewelry unearthed at Early Natufian sites, points to group or tribal differentiation expressed by the wearing of jewelry.

Ahiad Ovadia

¹ Morley 2013.



Human-Shaped Pendant

Newe Yam, Wadi Rabah culture, ca. 7,500 years ago, greenstone

L 5.2 cm, W 2 cm

IMJ 70.120.475

This human-shaped pendant was found in the shallow waters off the coast of Kibbutz Newe Yam, near a site, named after the kibbutz, that has been attributed to the Wadi Rabah culture. The pendant-figurine was found in 1969 by Nissim Shevah, one of the members of the kibbutz, who subsequently donated it to the Israel Museum. The head is distinguished from the body by a deeply carved neck. The eyes are indicated by round, probably drilled indentations, and the mouth is marked by a deep horizontal incision. The arms are created by long incisions along the body, while another long incision running from the center of the body to the bottom designates the legs. The back of the figure is flat, and three drilled perforations in the back of the neck were used for suspension. The body is rather small in comparison to the head, recalling the proportions of an infant or child. The pendant-figurine may thus provide rare, early evidence for jewelry that served as an infant's or child's protective amulet or as a commemorative object.

This pendant-figurine has no known parallels from other Wadi Rabah sites, but several of its features appear on other objects of the same period, such as a bone pendant from Tel Kabri, which was also suspended from the neck; and two bone figurines – one from Hagosherim and one from Newe Yam – which feature incised, symmetrical round eyes.¹

The pendant-figurine was carved from greenstone with white flecks. XRF photography revealed that it is composed of several minerals, among these amphibole calcite and epidote.² The source of this stone lies in the volcanic or metamorphic rocks of the Aegean region – western Turkey, Cyprus, or one of the Greek islands. A similar type of rock is known from the city of Söke on the western coast of Turkey. Since at sites attributed to the Wadi Rabah culture in our region, numerous objects made of obsidian from Turkey have been found, and since widespread trade relations existed in this period between our region and various cultures to the north and east³ – it is indeed likely that the stone

1 On permanent exhibition in the archaeology wing of The Israel Museum, Jerusalem.

2 The minerals were identified by Prof. Dov Avigad, with the assistance of Dr. Uri Ryb and Dr. Yael Ebert of the Institute of Earth Sciences, The Hebrew University of Jerusalem. I am deeply indebted to them.

3 Streit 2020.



from which the pendant-figurine was carved came from the vicinity of Turkey. The likelihood that the raw material came from an area hundreds of kilometers away from Israel's shores, coupled with the object's outstanding design, may point to the pendant-figurine's importance to its owners and indicate that it had great personal significance.

Ahiad Ovadia

Belt

Hayonim Cave, Natufian culture, ca. 14,500 years ago, fox teeth

L 36 cm, W 41 cm

IAA 1979-536

The members of the Natufian culture were the first to build stone houses, and they were sedentary, in other words, they remained in a single locality, for rather long stretches of time. Society became increasingly complex, as did the material culture. An expression of this was the practice of burying the deceased along with grave goods and jewelry, which became common in our region as the Natufian culture flourished.

In one of the most richly endowed burials in Hayonim Cave, the skeleton of an adolescent was found. The skull had been crushed by the weight of the earth that covered it, and the legs were removed when the wall of a later structure was built over the grave. The upper body was decorated with more than three hundred *Dentalium* shells, which seem to have been tied in strands and used to decorate the interred's garment. Beneath the left hand was a large bone tool, made from the rib of a bovine, and a bracelet, made from fox canines. On the pelvis (opposite), which was well-preserved, was a strand of fox canines arranged so



Belt made of dog's canines and shells

Sandaun Province (formerly West Sepik Province),

Papua New Guinea, mid-20th century

L between the shells at ends: 31 cm |

Private collection



that some faced in one direction and some in the other. Elements made from an additional material – perhaps an organic substance that did not survive – apparently served as spacers between the teeth; alternatively, the teeth may have been spaced by knots, as seen in strands used till this day in Papua New Guinea and Hawaii; the modern strands consist of dog's teeth threaded on leather bands or cords, which are tied in the front with string.

The wealth of ornaments discovered in the grave of so young an individual may point to the fact that the interred belonged to an upper class or distinguished family – and not necessarily to his or her elevated status as an individual. However, it is also possible that the death of such a young person caused particular grief, and that the ornaments were grave goods provided by members of the group as an expression of mourning during the burial ceremony.

Elaborate Headdress

El Wad Cave, Natufian culture, ca. 15,000 years ago, shell

L 76 cm, W 54 cm

IAA 1931-5

This skeleton, apparently of a male, is one of the most highly decorated skeletons known to date belonging to the Natufian culture. The interred was buried in an embryonic position, the head facing southeast, together with another four individuals and not far from other burials containing decorated skeletons, on the terrace of the El Wad Cave in the Carmel mountain range. On the head was a headdress of seven strands of *Dentalium* shells, arranged in a special manner – into each long shell, part of another shell was inserted, in order to make the aperture narrower. This arrangement was intended to keep the strand flexible and make it possible to wrap it around the head. In the visible part of the decoration, some 330 shells can be seen; it is estimated that below the left side of the skull, which is still buried in the earth as it was at the time of discovery, is a similar number of shells. Thus all told, the headdress consisted of almost seven hundred shells. The use of *Dentalium* shells was widespread in the Natufian culture. The shells were collected mainly from the Mediterranean shores, but also from the Red Sea. The thin edge of the shell was usually removed, and a string was threaded all the way through. In certain cases, the shell was cut widthwise to form a disk bead, which was used in bead strands and other ornaments.

Ahiad Ovadia



Headdress (*Enkuraru*)

Maasai people, Kenya, early 20th century, ostrich and other feathers,
hide, and glass beads

H 90 cm, W 60 cm

Gift from the Collection of Drs. Igor and Erica Mann, Nairobi

IMJ B02.1447

The Maasai are a semi-nomadic ethnic group inhabiting much of central and southern Kenya and northern Tanzania. Traditionally, Maasai men were organized into four main age-grades: initiates, *morán* (warriors in training), senior warriors, and elders. Each group had its own rites, social privileges, and adornments. Among the different African cultures head-coverings were often associated with a person's gender, age and role, while also marking affiliation with a certain cultural group. The ostrich-feather headdress seen here is called an *enkuraru*, which was worn in a way that frames the wearer's face. Different types of bird feathers were used as adornments by Maasai initiates and *morán*. While initiates were only allowed to adorn themselves with feathers from smaller song birds, *morán* were entitled to wear feathers from larger birds, such as the ostrich. The size of the headdress and the way it was worn created a menacing image aimed at intimidating opponents during raids and wars. The *enkuraru* also reflected a certain status among the warrior grade, as it was only worn by a Maasai warrior who had not yet killed a lion. The killing of a lion signified the transition into manhood and enabled the wearing of a different headdress made from a lion's mane, called an *olawaru*.

Yael Eshel



Chest Pendant

Papua New Guinea, late 20th century, Job's tears seeds, boar tusks, dog's teeth, bamboo, and string

L 36 cm, W 9 cm

On loan from the Faith-Dorian and Martin Wright Family, New York, to American Friends of the Israel Museum, in memory of their son, Jordan M. Wright

IMJ L-B11.0146

Pendants like these were typically worn by the men of the Papua New Guinea Highlands, and they reflect the subtle dynamic between jewelry and currency. Many Melanesian cultures, including the cultures of Papua New Guinea, used certain items, such as shells, dog's teeth, boar tusks, fur, and jade, as both currency and body ornaments. The parallel bamboo sticks strung in the chest pendant seen here are called *omak*, an element that records the wealth that one gives to others, such as kina pearl shells and pigs, and acts as an important indicator of social status. Each bamboo stick represented a certain number of ceremonial exchange transactions, and as such the *omak* would grow in length over a person's lifetime according to the number of successful transactions accomplished. Interestingly, the bamboo sticks, which are used here to indicate wealth, have little material value in and of themselves, as opposed to other materials, such as kina pearl shells and animal teeth and tusks, which had significant material value.

Yael Eshel



Personal Ornaments as Temporal and Ethnic Identifiers in the Prehistory of the Levant

Daniella E. Bar-Yosef Mayer

In our affluent western society, personal ornaments are often considered no more than aesthetically pleasing objects – a modern notion attributable to the mass-production and widespread distribution that began at the time of the Industrial Revolution. Millions of people around the world today wear jewelry on a daily basis, or on special occasions, very often without thinking twice about it. Yet, over the course of the three million years of human existence, this has not always been the case. When did humans begin to adorn themselves, how did they adorn themselves, and, especially, why did they adorn themselves? These questions have long been of special interest to archaeologists, anthropologists, cognitive scientists, and other researchers, yet to some extent still remain unanswered.¹

From their earliest appearance, beads were chosen for a set of reasons, and many beads (or their forms) undoubtedly bore meanings that elude us today. An exceptional case is the cowrie shell, which owing to its resemblance to female genitalia, almost universally symbolizes fertility; in some cultures, it also serves as a charm intended to deflect the “evil eye,” because of its eye-like shape.² Since scientists regard the earliest shell beads as compatible with art, psychological and neurological studies on the origins of art may shed light on such beads’ significance. According to Terrence Deacon, “art objects and artistic performances are created to communicate something that they are not. They are signs.”³ Signs and symbols can be used to re-represent experiences, to

1 I am indebted to Ahiad Ovadia for the invitation to contribute to this exhibition catalogue; to Anna Belfer-Cohen for consultations; and to innumerable colleagues who entrusted me with the study of shells and beads from their excavations over the years. Without them, this review would not have been possible. Any errors are my own.

2 Thomsen 1992.

3 Deacon 2006, p. 25.

serve as memory triggers, and to simulate life experiences, and as such they are a form of human expression.⁴ Moreover, in the archaeological record, we find that shell beads are among the oldest artifacts associated with abstract or symbolic thinking; as human cognition developed, so did the material culture that represents cognitive concepts. Finally, as studies of non-western contemporary societies indicate, ornaments serve as a means of interpersonal communication and convey information about individual or group identity, status, and, possibly, the feelings of the wearer.⁵

With the appearance of modern humans, *Homo sapiens*, we encounter the earliest mollusk-shell beads. The earliest known evidence for the collection of beach shells for a non-utilitarian purpose (i.e., neither for food nor for use as tools) is from Misliya Cave on Mt. Carmel, where common, unperforated *Glycymeris* (bittersweet clam) and *Cardiidae* (cockle) shells, which were probably symbolic items, were found, dating from around 160,000 years ago or earlier. Importantly, a similar assemblage is also known from South Africa at about the same time. The earliest beads – perforated shells of the species *Tritia gibbosula*, were recently discovered at Bizmoune Cave in Morocco, dating from around 142,000 years ago;⁶ such beads have also been found at sites dating from around 120,000 years ago in North Africa and the Levant. In the prehistoric beginnings of shell-bead use, a small repertoire of genera was chosen, consisting mainly of *Glycymeris*, *Cardiids*, and *Nassariids* (tick, to which *Tritia* belongs) shells.⁷ These few selected groups appear repeatedly over time and space and are found in different parts of the Old World: in North Africa, South Africa, the

4 Deacon 2006; Donald 2006.

5 Kuhn 2014. See also the chapter by Polly Wiessner in this volume.

6 Sehasseh et al. 2021.

7 Bar-Yosef Mayer et al. 2020 and references cited there.

Levant, and the Iberian Peninsula; all date from about 140,000–70,000 years ago, within the Middle Paleolithic period.⁸

A significant assemblage of *Glycymeris* shells was discovered at Qafzeh Cave (see pp. 32–33), a site best known for its early modern human burials dating from around 120,000–90,000 years ago. Few shells were discovered at this site, yet all were naturally perforated. Microscopic research conducted on the beads showed that they were not only collected and brought to the site, but were also strung and carried on the human body and covered with ochre, a natural red pigment.⁹

There is not much scholarly discussion on the use of color during the Middle Paleolithic period, but it is clear that shell beads appeared in three shades: white (or off-white) – the natural color of beach-worn shells; red – produced by covering the shells with ochre; and black – which was achieved by heating the shells. It is possible that the colored shells were combined in different ways to create patterns. The three colors appear not only in North Africa and the Levant, but also in slightly later sites dating from around 80,000 years ago in South Africa. In Europe, by contrast, where at this time Neanderthals were present, different raw materials were used for adornment, primarily bird feathers of various colors and the talons of birds of prey.¹⁰

There is a gap in our knowledge of personal ornaments during the period between around 70,000 to 50,000 years ago. However, at around 50,000 years ago, an increase in the diversity of shell species is attested, as well as the use of additional raw materials and the broadening of the geographic distribution of personal ornaments. In Africa, at three different sites in Kenya and Tanzania, ostrich eggshell beads appear for the first time.¹¹ These reflect not only the introduction of a new raw material, but also the introduction of a new technology. The ostrich eggshell beads are round and thin. They are commonly referred to as “disk beads,” a type common to this day, and which in many western societies represents what is considered to be “a typical bead.”

In Europe, modern humans replaced Neanderthals around 45,000 years ago, which brought about a number of changes in the material culture (especially, the introduction of new stone tool types) and marks the beginning of the Upper

8 Bar-Yosef Mayer 2020.

9 Bar-Yosef Mayer et al. 2020.

10 Bar-Yosef Mayer 2020, and references cited there.

11 Bar-Yosef Mayer 2020 and references cited there; Miller and Wang 2022.

Paleolithic period. In the domain of personal ornaments, two main shifts may be discerned: There is a significant increase in both the quantities and diversity of shell beads in relation to the Middle Paleolithic repertoire, and similarly to the appearance of ostrich eggshell in Africa, new raw materials were introduced: animal teeth, bone, antler, and mammoth ivory. Some researchers have proposed that the different types of ornaments represent the emergence of different language groups.¹² While this is impossible to verify, there are clear trends that may indeed indicate the development of discrete human groups or ethnicities.

In the Levant, clear chronological trajectories in bead-type preference are attested. Cultural units (sometimes referred to as “technocomplexes”) within the Upper Paleolithic sequence best known from Europe have been determined based on conspicuous components of lithic assemblages, with specific types of stone tools serving as *fossiles directeurs*. Evidence from Upper Paleolithic sites in Israel, including Manot and Hayonim Caves in the Galilee and Kebara Cave on Mt. Carmel, suggests that people bearing the Aurignacian material culture, typically encountered in Europe, had some degree of contact with a contemporaneous population that predated them and who continued to live alongside Aurignacians in some parts of the Levant – the Ahmarians. These cultures suggest that territoriality may have begun.¹³

A study of shell beads found in Upper Paleolithic sites supports the complexity of relations between groups of people at that time (around 40,000–30,000 years ago). The most frequently used shell beads in assemblages at this time are those made from the shells of two small gastropods: *Tritia gibbosula* and *Columbella rustica*. *T. gibbosula* shell beads were relatively common in North Africa and the Levant during the Middle Paleolithic period and continued to be present in circum-Mediterranean sites during the Upper Paleolithic. In Europe at this time, they were supplemented by *Tritia neritea* shell beads, also Nassariid shells. During the Middle Paleolithic, *C. rustica* shell beads are attested in very small numbers and only in North Africa; however, they became common throughout the Mediterranean basin during the Upper Paleolithic. The presence of *Columbella* shell beads in the Levant in both Ahmarian and Aurignacian sites (or in layers of these cultures within multi-layered sites) testify to their significance among

12 Bar-Yosef Mayer 2020 and references cited there.

13 Bar-Yosef Mayer 2019.



***Tritia gibbosula* and *Columbella rustica* shell beads**

Manot Cave, Levantine Aurignacian culture, 37,000–33,000 years ago

L 1.4–2.1 cm | IAA 2021-1741, 1743, 1665

these human groups. They were usually naturally perforated and sometimes covered with ochre.¹⁴ Another significant group of shells attributable to the Upper Paleolithic is the scaphopods (“tusk shells”) of the Dentaliidae family, which appear for the first time around 45,000 years ago in the Uluzzian culture of Italy. They seem to have arrived in the Levant from Europe, where they are found in the Aurignacian levels of several cave sites.¹⁵

Apart from the first appearance of scaphopods in the Levant, two rare samples of cowrie shells were discovered at Manot Cave: *Erosaria* sp. and *Zonaria pyrum*. These shells have not been encountered in any other Upper Paleolithic sites in the Levant, but since cowries were common in Europe at this time, it is likely that their presence at Manot Cave reflects Aurignacian customs. A few other unusual shells of supposed European origin, among them two small gastropod shells – *Ocenebrina edwardsii* and *Tritia mutabilis* – discovered at the Upper Paleolithic levels of Kebara Cave, may also be attributable to the presence of an Aurignacian ethnicity.¹⁶

Just as some shell beads resembling those from Europe and found in Aurignacian sites in the Levant attest to ties with European populations, the use of animal teeth as pendants is also associated with a European tradition. At both Hayonim and Manot Caves in the western Galilee, despite the availability of a large selection of bones of different animals that were hunted for food, red-deer canines as well as one bovid incisor were made into pendants by perforating the roots of the teeth. This is strong evidence for the group identity of the people who likely displayed these items on their bodies. However, it remains to be seen whether it represents the actual presence of Europeans in the Levant, European inspiration, or exchange between European and Levantine individuals.¹⁷

Shell beads also testify to encounters between Aurignacian and Ahmarian groups – two cultures that co-existed in the Levant in the Early Upper Paleolithic. This is expressed by a unique shell bead found at Kebara Cave – *Theodoxus chalucina* – a Pleistocene fossil from the Jordan Valley, where the Ahmarian culture was present. Similarly, a single *Syriomargaria apameae* shell,

14 Bar-Yosef Mayer 2020.

15 Bar-Yosef Mayer 2020.

16 Bar-Yosef Mayer 2019.

17 Tejero et al. 2020.

another Pleistocene fossil from the Jordan Valley, was found at Manot Cave. The Jordan Valley is a region for which there is no evidence for the presence of Aurignacian sites. Therefore, the presence of shells associated with Ahmariian culture at Aurignacian sites, which are not within the “usual” Aurignacian repertoire, speaks for the exploratory nature of the Aurignacian people who collected them, or, to interaction between Aurignacians and Ahmariians.¹⁸

The scaphopods (“tusk shells,” also called *Dentalium* shells), first encountered in the Levant at sites with an Aurignacian presence, continued to be used in relatively small numbers by some inhabitants of the land, for example, at Late Upper Paleolithic and Kebaran sites. The Kebaran culture of the Levant is characterized by the first use of microlithic tools for hunting and perhaps also fishing. These people, in addition to their continued use of *T. gibbosula*, *C. rustica*, and scaphopod shells, were particularly interested in the shells of another Mediterranean gastropod, *Mitrella scripta*, which has been discovered in many Kebaran sites throughout the southern Levant, as far as the Eastern desert of Jordan.¹⁹

A dramatic change regarding shell beads occurred during the Late Epipalaeolithic period, at sites of the Natufian culture. The Natufians, partially sedentary groups of hunter-gatherers, were the first builders of stone structures and apparently cultivated some plants, or at least were engaged in actively harvesting wild cereals; they are therefore considered the precursors of farming societies. Unlike most of their Levantine predecessors, the Natufians occasionally buried their dead with decorations on them, which gives us greater insight into who among them wore personal ornaments (males, females, or juveniles) and how such ornaments were arranged on the body. There is a considerable increase in the number of scaphopods found at their sites, from dozens per site to hundreds or even thousands (for example, at Hayonim Cave).²⁰ In the Early Natufian, we also encounter the intentional burial of the dead with scaphopod decoration (see pp. 22 and opposite): In some graves there seems to have been a preference for shells with smooth surfaces, while in others for shells with a ribbed texture, occasionally covered with ochre and originating mostly on the coasts of the Mediterranean

18 Bar-Yosef Mayer 2019.

19 Bar-Yosef Mayer 2005.

20 Belfer-Cohen 1991.

but sometimes the Red Sea. In the Late Natufian, however, scaphopods are no longer included in burials and are instead found only in habitation environments; usually the lengths of the beads are significantly shorter than those from Early Natufian layers,²¹ and Red Sea shells disappear. This seems to suggest either a shortage of shell availability on the shore – possibly a result of rising sea level – or a social mechanism that prevented the distribution of such shells.²² Notably, the Natufians not only used very large numbers of shell beads, but also supplemented the shell beads with pendants made of bone, particularly, the long bones of gazelle.²³ Bone pendants appear in different sizes and shapes (oval was especially popular), and, interestingly, bird bones, especially those of the partridge, but also birds of prey, seem to have been especially sought after, as the finds from Hayonim Cave, Eynan, and Erq el Ahmar suggest (see pp. 20, 35, 39). Moreover, there is evidence for the use of fox-teeth beads, strung as a belt worn around the pelvis of a Natufian buried at Hayonim Cave (see pp. 38–39).



Burial of an adult with a headdress of *Dentalium* shells

El Wad Cave, Natufian culture, ca. 15,000 years ago

Skeleton: L 73 cm, W 45 cm | IAA 1931-5

21 Early Natufian scaphopod beads are about 1–2 cm long whereas Late Natufian beads can be as short as 2 mm.

22 Bar-Yosef Mayer 2010.

23 Phillips et al. 1998.

In the Late Natufian period, shell and bone beads were complemented for the first time by another medium: stone. The earliest stone ornaments in Israel are nine green pendants, discovered in Dorothy Garrod's excavations at El Wad Cave, Mt. Carmel, made of the mineral apatite, which consists primarily of calcium and phosphorus.²⁴ In Israel it is found in the phosphate-bearing Mishash formation and in the metamorphic Hatrurim formation in the Negev; it is also found in Jordan, where such stones are called "Dabba marbles." The apatite pendants of El Wad are similar in shape to the oval bone pendants, but probably, because they were harder to work, their contour appears more rectangular than oval.²⁵ However, use-wear around their perforations indicate that both the bone and the stone pendants were suspended in a similar way. Apatite, which exists in various colors, including brown-black, red, and green, was also used to produce "disk beads" – which continue to be used to this day. Similarly, it was used for making a type of ornament that was only in use for a short time: the double-perforated pendant (see p. 56), found only in final Natufian / Early Pre-Pottery Neolithic A sites. Technologically, some of the stone beads and pendants, as well as some of the shell beads, from the last phase of the Natufian culture were produced as "disk beads."²⁶

The Neolithic period, the time of the "agricultural revolution," when the domestication of plants and animals took place, reflects a transition from hunting and gathering to farming, and as a result, people became more sedentary. Many new raw materials and technologies for obtaining and producing beads of different types were introduced at this time. This undoubtedly represents a development toward craft specialization, a crucial step in the next phase of human evolution. The new lifestyle led to a significant change in people's belief systems and to the development of large-scale, organized ceremonies, expressed by, among other things, a surge in the extent and diversity of personal adornment²⁷ – including the addition of a large variety of shell species used as beads, as well as ornaments made of other materials. These beads were very common among the desert dwellers of Sinai, the Negev, and southern Jordan, some of whom were still hunting and gathering, but who maintained

24 Bar-Yosef Mayer et al. 2013.

25 Bar-Yosef Mayer 2013.

26 Groman-Yaroslavski et al. 2013; and chapter by Ovadia on pp. 14–31.

27 Wright et al. 2008.



Apatite pendants

El Wad Cave, Natufian culture, ca. 13,000 years ago

L 1.2–1.8 cm, W 0.7–0.9 cm | IAA I 1732, 1735, 1738



Double-perforated stone pendants

Various sites, Natufian, Khiamian, and Sultanian, cultures, ca. 12,000–10,000 years ago

L 0.7–2.6 cm | IAA and Staff Officer for Archaeology – Civil Administration of Judea and Samaria

social and economic relations with their contemporaries in the Mediterranean region, where farming was practiced. They utilized Red Sea shells for personal ornamentation as well as for exchange with populations living in the sown areas; indeed, such shell beads have been discovered as far as the northern Levant (for example, at Yiftahel and Kfar Hahoresh in the Galilee, and at Tell Aswad in Syria). *Pinctada margaritifera*, a mother-of-pearl from the Red Sea notable for its attractive luster, was used to produce pendants, though often only single examples of such pendants are found in a given context (see p. 17).²⁸

In the Pre-Pottery Neolithic B period (around 10,800 to 8,500 years ago), some interesting developments regarding stone beads may be observed. First, there is an increase in the diversity of raw materials used, with a distinct preference for the color green. Since this is the period of early agriculture, it has been suggested that green beads symbolized the wish for green plants and crops and overall fertility (see p. 59).²⁹ Second, certain types of beads continue to be produced and used, especially “disk beads,” while other, larger and longer beads received special treatment: they were “thinned,” resulting in an oval or lenticular cross section (perpendicular to the hole).³⁰ This process was probably intended to facilitate the beads’ attachment to clothes, as is clearly visible in the case of a single stone bead from Nahal Hemar Cave that was discovered still attached to fabric. The third observation relates to another technological innovation based on two unique beads made of carnelian, a translucent red stone as hard as flint (7 on the Mohs scale) and difficult to work, also discovered at Nahal Hemar Cave (see p. 60). These beads belong to a type known as “butterfly beads.” Their production began with the heating of the raw material, followed by several steps of filing, grinding, perforating, and, finally, tumbling to create a sheen. This technology is best known from sites in the northern Levant, where butterfly beads were more common. Thus, it is likely that the Nahal Hemar specimens could have been brought from as far as the northern Levant (northern Syria or southeast Turkey of today).³¹

In addition to the small but varied assemblage of stone beads and a large assemblage of Mediterranean and Red Sea shells, Nahal Hemar Cave yielded

28 Bar-Yosef Mayer 1997; Alarashi et al. 2018.

29 Bar-Yosef Mayer and Porat 2008.

30 Bar-Yosef Mayer 2013.

31 Groman-Yaroslavski and Bar-Yosef Mayer 2015; Alarashi 2016.

two types of beads that have not yet come to light anywhere else: wooden beads and plaster beads. These were probably preserved, like the textiles discovered at the site, thanks to exceptional conditions of the cave. Many of them bear traces of white, red, and green matter.³² Very little is known about the production of these beads, which often still have remains of strings inside. It is reasonable to assume that similar beads must have existed at other sites, but did not survive, as is likely the case with ornaments of other organic materials, such as seeds and feathers. It is possible that feathers were used at other Levantine sites, such as Wadi Feynan 16 (Jordan) and Nahal Roded 110 (near Eilat), where large assemblages of bird bones have been discovered; this possibility, however, is still under investigation. The scarcity of bone beads in Neolithic assemblages, in comparison to their relative abundance among Natufians, could be tied to their replacement with wood. It has been suggested that Nahal Hemar Cave was an aggregation site used for the congregation of Neolithic groups, possibly for special ceremonies. The broad range of materials of diverse functions and morphologies discovered there attests to the ties between different groups, rather than the material culture a specific group.³³

Another interesting innovation of the Pre-Pottery Neolithic B period are bangles. Whereas bracelets and anklets, which are strung beads worn around the arm, wrist, or ankle, are known from Natufian sites, and were often made of scaphopod beads, the bangle is an ornament made of a single homogenous material that is worn around the arm or ankle. While bangles made of wood or other plant materials may have existed earlier, no examples have survived. Bangles made of stone and shell are best known from Pre-Pottery Neolithic B sites in Jordan, and they have been recently discovered at the mega-site of Pre-Pottery Neolithic B Motza, near Jerusalem.³⁴ Because these items are limited in time and space, they might indicate the preference of a particular Pre-Pottery Neolithic B group that lived mostly in mountainous areas of the central Levant.

Ostrich eggshell beads, although present in Africa from around 50,000 years ago, appear much later in the Levant. A unique example is associated with an Early Epipalaeolithic site (see pp. 84–85), but the earliest evidence for

32 Bar-Yosef and Alon 1988.

33 Bar-Yosef and Alon 1988; Borrell et al. 2020

34 Vardi et al. 2020.

**Greenstone beads**

Various sites, Natufian, Sultanian, and Khiamian cultures, ca. 13,000–10,000 years ago

L 0.5–3.5 cm | IAA and Staff Officer for Archaeology – Civil Administration of Judea and Samaria



Carnelian "butterfly bead"

Nahal Hemar Cave, Pre-Pottery Neolithic B, ca. 10,000–8,000 years ago

L 3.3 cm, W 2.5 cm | IAA 2013-1356

the entire production sequence comes from the Pre-Pottery Neolithic B site of Nahal Lavan 109 in the Negev. A later, fifth millennium BCE assemblage contained over 2,500 ostrich eggshell beads, some from a single grave at Tel Tsaf (1,667 as one cluster – see pp. 68–69), and additional examples were concentrated in a courtyard.³⁵ Despite these examples, ostrich eggshell beads seem to have been generally produced elsewhere and are rare in Neolithic and Chalcolithic sites of the Levant.

Very few assemblages of the Pottery Neolithic period are known. In terms of personal ornaments, the finds seem to be poorer in quantity and variability by comparison to the rich and diverse Pre-Pottery Neolithic B assemblages. One item, however, stands out – an elongated pendant, about 3 cm long, made of red limestone and discovered at the Neolithic site of Sha'ar Hagolan (see p. 62). The uniqueness of this item lies not only in its shape, but also in the pattern of twenty-one parallel incisions along its entire length. One possible interpretation of this pattern, which may be pertinent to the pendant's red color, is that it represents a counter for a woman's menstrual cycle. Because this is a unique find, this proposal cannot be verified, but the pendant is certainly related to a symbolic system that might have only been understood by people (or a person) belonging to a specific group.

In the Chalcolithic period (fifth–fourth millennium BCE), there seems to have been an additional increase in the shape, size, material, and color of personal ornaments. An example is the appearance of “trapezoidal” pendants, usually with two holes in the narrower end of the trapezoid. These pendants were produced in a large variety of raw materials (such as mother-of-pearl originating both in the Red Sea and the Nile River, bone, and limestone) and in various colors (such as white, green, red, and brown) and sizes; in addition, they were sometimes incised with patterns (see p. 63). The trapezoidal pendants are occasionally found in association with burials. Geographically, they seem to be confined to southern Israel and may thus represent ethnicity, though this proposal warrants further research.³⁶

Another group of prominent Chalcolithic ornaments are very small beads made of glazed enstatite (see p. 64). Such beads can be as small as 2 mm in

35 Garfinkel et al. 2009.

36 Bar-Yosef Mayer 2002.



Red limestone pendant with incised motif

Sha'ar Hagolan, Yarmukian culture, ca. 8,400–7,700 years ago

L 3 cm, W 0.8 cm | IAA 2014-1382

diameter, and their production technology is not entirely understood. Nevertheless, glazed enstatite is considered to be one of the first man-made materials produced by means of an elaborate pyrotechnology (a technology that was used by Chalcolithic people for metallurgy and would be further developed in later periods for the production of faience and glass). The basic raw material for producing enstatite is talc (steatite), a very soft stone. As far as we can tell, the process involved grinding the talc; mixing it with water and probably ash, as well as powdered copper as a colorant; shaping the paste along a rod made of an organic material (possibly straw); and heating it at high temperatures (at least 800 °C). The heating resulted in very hard beads – enstatite. We do not know where the talc (which is not known in Israel) was obtained, nor if and how the technology arrived here; indeed, it is possible that the beads were never actually produced here, but rather reached the Levant through exchange with other groups. Clearly, since similar beads are found throughout south and southwest Asia – from Pakistan, Mesopotamia, and the Levant to Egypt, and from the fifth to third millennium BCE – it would appear they do not represent a single ethnic group, but rather, interconnections between various groups throughout this vast geographic and temporal span.³⁷

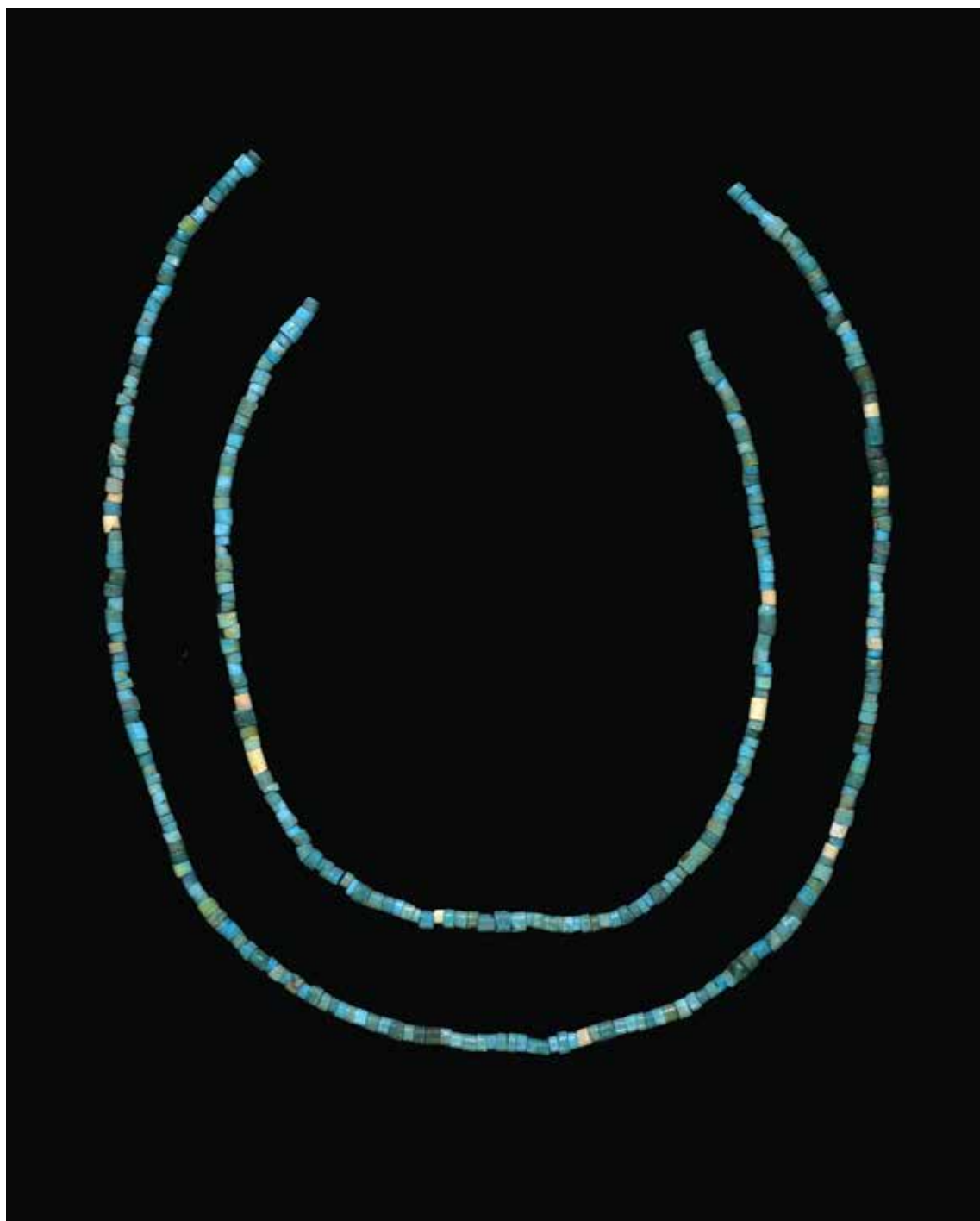


Trapezoidal pendant made of shell

Kissufim, Ghassulian culture, 6,500–5,800 years ago

L 4.2 cm, W 4 cm | IAA 1993-2943

37 Bar-Yosef Mayer et al. 2004.



Reconstructed strand of glazed enstatite beads

Cave of Skulls, Ghassulian culture, ca. 6,500–5,800 years ago

L 20 cm, W 15 cm | IAA 1953-1305

To conclude, personal ornaments that first appeared more than 100,000 years ago and spread across the globe along with *Homo sapiens* were a means of expressing group or individual identity, status, and belief systems. As human society became more complex and diverse, so did personal adornment. Newly invented technologies and newly discovered sources of raw materials, as well as the manufacture of new, man-made materials, enabled this progression. Researchers today try to decipher the various technological steps, while also attempting to trace the original meaning and spiritual values of personal adornment stemming from our prehistoric past.

Bead Bundles

Cave of Skulls, Ghassulian culture, ca. 6,500–5,800 years ago, linen,
enstatite, animal tendon, leather

L 10 cm, W 6.5 cm

IAA 2016-9089

One of the hallmarks of the Chalcolithic period (ca. 6,500–5,800 years ago) in the southern Levant is the occupation of difficult-to-access cliff caves in the Judean Desert, an area located between the densely settled provinces of the Ghassulian culture in the Lower Jordan Valley and the Beersheba Valley. The most famous of these caves is the Cave of the Treasure in Nahal Mishmar, where in 1961 the largest hoard of copper objects from the later prehistory of the Near East was discovered. A year earlier, archaeologist Yohanan Aharoni located and excavated a group of caves on the northern bank of Nahal Tze'elim, a few kilometers southwest of the Cave of the Treasure. In the largest of these caves, named the Cave of Skulls, material evidence for human presence from three main phases was unearthed: the Chalcolithic period, Early Bronze Age I, and the time of the Bar Kokhba Revolt in the second century CE; other caves excavated at the time in this region presented a similar picture. Among the finds attributed to the Chalcolithic period were two small cloth bundles fastened with string, each of which contained thousands of beads. The bags were found in the western part of the cave, together with a special object in the shape of a small basket or case; it was made from beads tied to one another with string and was equipped with a leather strap. In 2016, in the course of renewed excavations in the Cave of Skulls conducted by the Israel Antiquities Authority and the Institute of Archaeology of The Hebrew University of Jerusalem, a third cloth bundle was found, at the edge of the western part of the cave.

The bundles were made from linen threads using the splicing technique characteristic of the Chalcolithic period. Their attribution to the Chalcolithic period was further confirmed by radiometric (¹⁴C) dating performed on cloth samples. Most of the beads, which amount to more than 10,000, are flat disk beads in shades of green which were identified as made from copper-glazed enstatite. Enstatite is a pyrotechnological product created by burning the mineral talc, which does not occur naturally in Israel except in the Eilat mountains; the origin of the beads remains unknown to date. In addition to the enstatite beads, there are small numbers of beads of other materials, in particular what is probably red carnelian. In one of the bundles found in 1960, which was partly open, one could see that the beads were strung together, indicating that the bundles contained



jewelry strands, in all probability necklaces. X-ray photography revealed that the bundle discovered in 2016, which archaeologists decided to keep closed, also contained a similar necklace or necklaces as opposed to individual beads.

The bead bundles from Nahal Tze'elim constitute in all likelihood a personal or family hoard, which may have been hidden by its owners in anticipation of retrieving it at a later date, an anticipation that was never fulfilled. Aside from their contribution to the study of cultural and technological developments with regard to textile production and jewelry-making, it would appear that the hoarded bead bundles reinforce the hypothesis that the Judean Desert cliff caves served as places of temporary refuge during the Chalcolithic period, perhaps as a result of growing tensions within Ghassulian society, similar to the role they would play thousands of years later during the Roman period.

Elaborate Belt

Tel Tsaf, Middle Chalcolithic period, ca. 7,000–6,500 years ago,

ostrich eggshell

Dia. of beads 0.5–0.9 cm

IAA 2021–2134–6

In the Middle Chalcolithic period (ca. 7,000–6,500 years ago), the Jordan Valley was an important agricultural region. With land suited to farming, large quantities of water, and vast areas for grazing it was a veritable paradise for early agricultural societies, such as the community at Tel Tsaf. Enormous quantities of grain were collected and stored in the large silos found there, and a deep well – one of the earliest in the region – was dug. The community's inhabitants traded and maintained cultural contacts with distant areas, as evidenced by their material culture, rich in such imports as obsidian (a volcanic glass originating in Turkey), shells from the Nile, and pottery from the northern Levant.¹ Additional evidence points to an increase in social stratification and the emergence of classes, along with the beginnings of administrative practices.²

So far, four burials have been excavated at the site. One of them contained the remains of a woman who was about forty years old at her death. No less than 1,667 ostrich eggshell beads were found arranged in six strands around her pelvis. The grave was dug in the center of a large mudbrick granary. On the woman's skeleton, excavators also found a lead awl, which is considered to be the oldest metal tool in the land. The beads are uniform in size, and it appears that they were produced in a series.³ The large number of beads may indicate that the woman had a high social status – a possibility reinforced by the presence of the metal awl in the grave. The tool must have been regarded as extremely prestigious, since metal objects were exceedingly rare at the time.

Ahiad Ovadia

1 Garfinkel et al. 2014.

2 Ben-Shlomo et al. 2009; Freikman et al. 2021.

3 An explanation of the proposed manufacturing process is provided on pp. 84–85.



Personal Adornment: Its Many Messages and Thoughts on How to Read Them

Polly Wiessner

I bedeck myself with beads and feel young again. I forget that my knees and back ache and dance joyously. (/Ukxa, //Aru village, Ju/'hoansi people)

When I receive a beautiful gift of jewelry, I know that the giver, no matter how far away, holds me in her heart and will see me through the worst of times. (Tci!xo, /Kae/kae village, Ju/'hoansi people)

He recognized the traveler as a man from the east by his wide bark belt. (Ambone Mati, Kopen village, Enga people)

When a person died, women gathered, blackened their faces, and donned scores of strands of mourning beads made of Job's tears. The necklaces were worn for months. (Lelyame Anton, Kaiap village, Enga people)

The great Pendaine was dressed to perfection from head to toe. It was midday, and his body glistened under the sun's rays. Because of his tall stature, his plumes seemed to reach the sky. It was a dazzling, spectacular sight as the colors of his ornaments and plumes reflected the bright sunlight. (Kopio Toea Lambu, Lenge village, Enga people)

Personal adornment, used for celebration, decoration, communication, expressing personal and group identity, marking stages of life, advertising social standing, and gifting for the purpose of bonding, is a cultural universal as old as our human lineage. Shell beads dating back 142,000 years have been found in excavations in North Africa and into the Levant,¹ as well as at the other end of the continent in South Africa.² These beads may be the remnants

1 Vanhaeren et al. 2006; Sehassseh et al. 2021.

2 Henshilwood et al. 2004.

of more elaborate forms of adornment which originally comprised perishable materials, such as leaves, flowers, seeds, bones, and body paint. Around 50,000 years ago, beads carefully crafted from ostrich eggshell appear in the archaeological record, indicating increasing sophistication in the means used to communicate identity and affiliation and most likely the development of more extensive social networks.³ Thereafter, items for personal adornment abound in the archaeological record.⁴

As the above-mentioned quotes attest, body decoration and personal adornment are used to communicate a wide variety of messages. To give a sense of their many possible roles in human societies, I will describe personal adornment as reflected in the life cycles of two very different small-scale societies with whom I have worked intensively: the Ju/'hoansi bushmen of northwest Botswana and northeast Namibia and the Enga horticulturalists of highland Papua New Guinea. I will then briefly discuss the ways in which certain kinds of information about the past might be derived from these examples. Ethnography cannot be used for the direct interpretation of archaeological remains from generations past. It can, however, help us identify near-universal human behaviors and understand the ways these behaviors are communicated through personal adornment. Such behaviors include the tendency of all humans to compare themselves to others, express personal and social identity, signal status, bond as groups, define group boundaries, and express emotional states. Needless to say, hypotheses concerning the role of personal adornment in the past must also be evaluated in the light of other archaeological data, especially those providing information about social relations, economy, and ecology.

3 Ambrose 1998; Bednarik 2011; Miller and Willoughby 2014; Stewart et al. 2020.

4 Gamble 1999; McBreaty and Brooks 2000; Bar-Yosef Mayer et al., eds., 2017, Bar-Yosef Mayer 2019.

The Ju/'hoansi

The Ju/'hoansi (!Kung) of northwest Botswana and northeast Namibia are former hunter-gatherers whose lifeways are well-documented in scientific literature and film.⁵ In 1974/75, when I conducted studies of their material culture, the Ju/'hoansi lived in small groups of 25–40 people, but were highly mobile within their areas of land rights. Most individuals spent three to four months a year visiting people in other areas and utilizing their resources, particularly when water was short. Relations were egalitarian within and between the sexes, though elders enjoyed considerable authority and respect. The Ju/'hoansi maintained extensive exchange networks called *xaro*, which were formed by marriage ties. The regular exchange of gifts within these networks revealed information about underlying relationships of mutual support and access to resources. Individuals in such networks maintained relations with an average of 15 partners each, some of whom lived up to 150–200 km away. These partners were visited for pleasure or in time of need.⁶ Nowadays, the Ju/'hoansi live in semi-permanent villages, where they practice a mixed economy of gardening, animal husbandry, hunting and gathering, and wage labor, further supported by government subsidies. Thus, I will be describing their culture in the past tense, even though many aspects of their lives today remain the same as they were when I lived among them.

Among the Ju/'hoansi, personal adornment began a few weeks after birth, when grandparents or other close relatives brought beads for necklaces, armbands, and leg bands as *xaro* gifts for the infant, as well as hair ornaments to protect the child from illness. Parents periodically cut off the beads and put them in the child's hand, so that he or she could give them to older relatives, who then replaced them with new ones. By the age of two, children objected to giving away their beads, which were perceived as personal possessions. When old enough to walk, toddlers donned beaded aprons suspended from a waist belt to cover their genitals, though these rarely stayed on or in place. As toddlers matured, beaded aprons were replaced; the mother or grandmother often wore these tiny aprons as necklaces, which signified the growth of their child.

5 Marshall 1976; Lee 1979.

6 Wiessner 1982.

When girls approached puberty, many became flirtatious and adorned themselves with numerous necklaces, as well as beaded ornaments on their heads, arms, and legs. At first menstruation, they were isolated in a ritual house, where they remained for a week and were showered with gifts of food and jewelry. Older women danced nearly naked around the hut with strands of ostrich eggshell beads hanging down over their buttocks to indicate fertility. Most parents arranged marriages for their daughters just prior to or following menarche. In this context, they rubbed the girls' bodies with fat and ochre and lavishly decorated them with gifts of beads and other ornaments, to mark their transition to adulthood and married life. Many girls, however, though flirtatious in earlier years, rejected marriage and threw away such gifts:

They struggled with me, carried me piggyback, and put me down at the marriage hut. Then people smeared and smeared us with eland fat and red earth. They put beads on me and bedecked me with yellow-bark cord ornaments. Then they dispersed and I went home where I asked my peers to take those things off of me. They removed them and threw them in a heap to the side. When my mother saw what I had done, she scolded me. (/Ukxa, //Aru village)

Personal adornment continued to be of great importance throughout the lives of the Ju/'hoansi to indicate beauty, worth, and social connections. As a rule, women wore more personal ornaments than men, though some men donned necklaces, decorated loincloths, and headbands, particularly when dancing. Older women who were active in arranging marriages for their sons, daughters, or grandchildren often bedecked themselves with beads received in *xaro* exchange to flaunt their many social connections (see p. 74). Highly valued jewelry often incited gossip and jealousy. On the way home from foraging trips, small groups of women would sometimes decorate themselves with leaves, seeds, fruits, and flowers to express their high spirits.

Many items of self-adornment were widely circulated during seasons when food was plentiful and people from different areas gathered to meet friends, dance, arrange marriages, and exchange gifts, as in the following excerpt from a description of such a gathering:

She put the beaded headband on her head, and then she put another one on and went slowly over to her grandfather, old Kagece, and gave out more gifts. It was the beginning of gift-giving. He

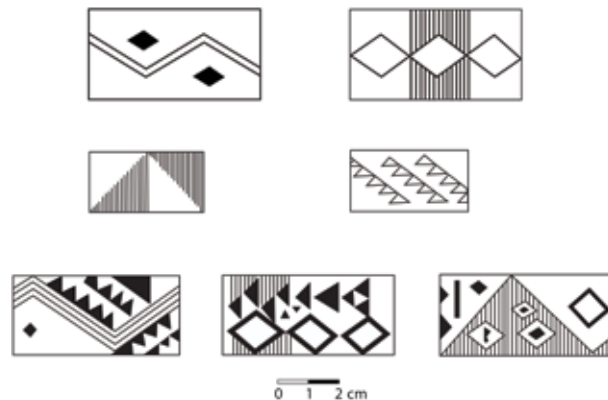


Tcilxo nla wearing numerous necklaces and ornaments intended to display her social ties and secure a match for her grandson

Ju/'hoansi people, Botswana and Namibia, 1970s

[Kaqece] tried to put the beaded headband on his head, but it didn't fit, so he took it off his head and gave it to my granny and gave other things to her. In turn, my granny took out ostrich eggshell necklaces and gave them to her grandfather, the late Kaqe n!a'an, who then passed them on to a younger relative. Then he gave an ostrich eggshell necklace to her. (N/hakxa, Mountain Pos village)

When colored-glass beads became available in the twentieth century, beadwork styles flourished; the different styles corresponded to different spheres of interaction, but did not mark boundaries in this foraging society where open boundaries were essential for survival. Interestingly, even when the Ju/'hoansi were exposed by tourists or craft agencies to the beadwork styles of the Zulu and other neighboring agriculturalists, these styles were not adopted; the Ju/'hoan repertoire as a whole was and remains an expression of ethnic identity. With increasing access to glass beads in areas where some of the Ju/'hoansi were settled by the South African government starting in the 1960s, individual expression increased within the basic Ju/'hoan styles. However, the Ju/'hoansi who remained in the more remote areas rejected these developments as being indications of the stressful and noisy social conditions at the settlements.⁷ With the recent influence of Christian missionaries, some Christian symbols have begun to appear on items such as beaded mobile phone covers, an expression of the new religious affiliation and modernization.



Traditional beadwork patterns

Ju/'hoansi people, Botswana and Namibia, 1970s

7 Wiessner 1984.



Beaded cellphone case with crosses

Ju/'hoansi people, Botswana and Namibia, early 21st century, glass beads

There are some emblems that mark group identity among the different Bushman linguistic groups. For example, Ju/'hoansi women wear pubic aprons trimmed with ostrich eggshell beads, while their distant neighbors the G/wi women wear aprons decorated with dangles made from the bones of small birds and mammals. In this case, pubic apron styles express internal identity and a certain degree of in-group conformity, but do not signal boundaries. The same is true for projectile points, which differ in style and size between linguistic groups. They mainly express in-group identity and shared norms and values regarding hunting.⁸

The Enga of Papua New Guinea

The Enga of Papua New Guinea are a highland horticultural population who live in a mountainous terrain at altitudes between 1,500 and 2,500 m.⁹ Their staple crop, the sweet potato, supplemented by other garden foods and forest products, is used to feed large human and pig populations. The Enga comprise nine dialect groups that share important economic, political, and religious orientations; these are further divided into tribes, clans, sub-clans, and lineages.

⁸ Wiessner 1983.

⁹ Meggitt 1965; Kyakas and Wiessner 1992; Wiessner and Tumu 1998.

Traditionally, the Enga men engaged in heavy garden work, house building, warfare, and the politics of ceremonial exchange, while the women devoted themselves to raising children, pig husbandry, and the lighter garden work. There was a strict division of labor and segregation between the sexes, with the men residing in men's houses and the women in women's houses, owing to male fears of female menstrual contamination. Men operated in the public realm and were dominant in many activities, though women had substantial influence in the private sphere.

Quite unlike among the Ju/'hoansi, it was the Enga men, rather than women, who were concerned with personal adornment. At the age of six or seven, boys left the women's house to stay with their fathers in the men's house; it was believed that they would not mature and grow strong if they continued to live with menstruating women. When young boys moved to the men's house, they were given rope belts from which woven net aprons were suspended to cover their genitals, while cordyline leaves covered their buttocks. Many also wore necklaces with cowrie and cut conus shells. As they reached puberty, they attended bachelors' cults where they were taught to care for their bodies and protect themselves from female contamination. In the first year they covered their hair with moss and bark cloth soaked in tree oil, which hung down over their eyes. In the second year they began to fashion wigs from their own hair, which they had collected over the years. The hair was cleaned and combed and then carefully woven into the young man's natural hair. The hairdresser chewed sugarcane and berries into a sticky dark purple juice and spat it onto the wig. This was done again and again until no hair was out of place. Pieces of pork were heated over the fire and the fat dripped onto the wig to make it firm. Young men had to take great care of their wigs, often sleeping with a stick supporting their necks as a pillow and reciting magic spells to keep from ruining them. Once young men had completed their years attending bachelors' cults, they were permitted to wear the elaborate detachable wigs adorned with plumes used for *sing-sings* (public dances) and ceremonial events.

Girls remained with their mothers and were taught to wear grass skirts and long net bags suspended from their foreheads, which covered their hair day in and day out. When it came time for marriage, the bride was greased in pig fat and elaborately dressed in several layers of specially fabricated grass skirts, a bridal hood trimmed with shells, and a special net bag trimmed with fur, which was made for the occasion by the bride's mother or another close



Two travelers wearing traditional wigs
Enga people, Papua New Guinea, late 20th century

relative and filled with charms for attracting bride wealth. The bride also wore several necklaces of cowrie and pearl shells, as well as arm- and leg-bands. After marriage, however, women wore few items of personal adornment, except on special occasions.

Both men and women spent hours dressing in elaborate ceremonial dress for *sing-sings*, applying body oil and face paint and donning necklaces, armbands, and leg-bands (see p. 81). The men also wore elaborate detachable wigs crowned with bird-of-paradise plumes. Interestingly, men and women could cross-dress at these dances to the amusement of by-standers. For example, a man might dress as his shy sister to advertise her eligibility for marriage.

The Enga from different regions had very different wig styles, which were immediately recognizable at a distance. When *sing-sings* were held for in-group events, there was considerable individual and artistic expression in the styles of ceremonial dress. However, when such events involved competition between different groups, there was great homogeneity within groups, as participants sought to express group unity and strength through uniformity.

Men from different parts of the Enga province not only had different wig styles, they also wore different styles of belts (of cane, bark, or cord). People could immediately recognize where travelers, who crossed boundaries for trade or other purposes, were from. Since there was little competition between regions and people traveled widely, these features signaled some differences in norms and practices but were not used to maintain impermeable boundaries; instead, they signaled in-group similarities and outgroup differences.

There was fierce competition within Enga clans and tribes for leadership. The status of *kamongo*, or big-man, was marked by the privilege of wearing certain personal ornaments. At major events such as the exchanges of pigs and wealth, leaders were magnificently adorned with body oil, paint, plumes, and pearl shells (see p. 82). If men of lower standing wore such finery, they would be subject to ridicule.

What Information Can Be Derived from Personal Adornment?

Based on the above-mentioned examples of just two small-scale societies, it is clear that personal adornment was and still is used to communicate a wide range of messages. Given the diversity of these messages and the difficulty of knowing why a particular meaning is attached to a particular form, is it possible to glean any information about social relations in the past from artifacts found

in archaeological assemblages for which we have no ethnographic information? Below I offer a number of suggestions and speculations.

Humans have a deep-rooted tendency to adorn their bodies in order to draw attention, convey personal states (such as the state of mourning), express emotions, or spontaneously celebrate joyous events. Such adornment may leave few traces in the archaeological record, but when it does, it is likely to show up in items that can be donned impulsively or require minimal investment, as evidenced by such remains as uncut shell beads, seed beads, and ochre or other substances used for body painting. These items may have been part of broader decorative wardrobes, which originally also included perishable items and were used to facilitate intra- and perhaps even intergroup communication.

As investment in items of personal adornment increases, so does the likelihood that such items were used to express social standing, attract mates, or serve as tokens of relations in gift-exchange along social networks. Items of personal adornment used for gifting are usually of considerable value, in order to reinforce bonds and show attachment or esteem. On the one hand, they exhibit homogeneity across space in basic form, as people influence one another and express shared norms and traditions. On the other hand, they also encompass a significant range of variation generated by individual expression, such as the Ju/'hoansi beaded headbands discussed above or the paraphernalia used in Enga in-group dances. Such items rarely bear distinct symbolic meanings that express identity or group membership, but can demarcate spheres of influence between those who interact most frequently.

By contrast, some items of personal adornment requiring extensive input bear distinct referents or messages that signal gender, stages in the life cycle, wealth, or social standing. The meaning of these may be in part discerned by archaeological context. For example, if it is possible to separate female from male items of adornment via analysis of living spaces or burials, then it should be possible to glean some information about relations between the sexes and the role of personal adornment in these relations. For the Enga, the traditional emphasis on decorating men as birds of paradise indicated their dominance in public roles. Today, however, with the change in gender relations, the men have begun to sport baseball and other caps while the women wear elaborate international hairstyles. The degree of visibility of personal adornment may also hold valuable social information. Personal adornment with limited visibility or that which plays a role in secret societies usually conveys messages



Men wearing traditional ornaments at a *sing-sing* (public dance)
Enga people, Papua New Guinea, late 20th century



Community leader ("big-man") and his son gifting a cassowary at a *sing-sing* (public dance)
Enga people, Papua New Guinea, late 20th century

of a more personal, individual nature, while highly visible features of attire that can be read from a distance, such as men's belts and wigs, are more likely to signal group identity and mark boundaries.¹⁰ Boundary demarcation can either inhibit interaction or facilitate it.¹¹ The nature of intergroup relations may be partially ascertained by the movement of other goods and valuables across the demarcated boundaries.

Personal adornment is a primary means of expressing worth or social standing. Luxury items acquired from afar are indicators of wealth, broad regional knowledge, and ability to manage networks. As social complexity and hierarchy increase, status markers become ever more expensive and elaborate. The privilege to wear such symbols of status may be staunchly defended.

Changes in personal adornment over time hold a wealth of information on broader changes, such as expanded or narrowed spheres of influence, shifting boundaries between groups, or the emergence of social inequalities. The ratio of personal expression to expression of group identity may provide valuable information on the changing relation of individuals to society in response to political and economic conditions. For example, in times of threat, people tend to adopt more homogenous modes of personal adornment in order to express group unity and strength, while in time of peace, economic prosperity, and economic opportunities, individual expression may increase.

Finally, personal adornment reflects the extraordinary creativity of humans and the impact of aesthetics on mood and interactions. Messages transmitted via aesthetic means are also remembered longer, sometimes over generations via oral tradition. As one old Enga man remarked when admiring exquisitely cut mother-of-pearl shell:

There were some cut-pearl shells that were extremely beautiful and much more highly valued than others. These were regarded as so precious that people could even start a tribal war over them. Women fall in love at the very sight of a pearl shell of this kind.

10 Wobst 1977.

11 Barth 1998.

Disk Bead

Nahal Ruth, Geometric Kebaran culture, ca. 17,000 years ago,

ostrich eggshell

Dia. 0.8 cm

IAA 1983-503/4

Disk beads were rare here prior to the time of the Natufians (around 15,000 years ago). One of the few examples known to us was discovered in Nahal Ruth. Outstandingly crafted from ostrich eggshell, it is around 17,000 years old. The time invested in the production of the bead and its fine finish attest to the great importance that the people of this period attached to the practice of adornment and to the aesthetic value of the jewelry they wore. Much effort was required to achieve the perfectly round shape of the bead, and thus it would appear that just as in later periods, the round shape was highly prized. Besides its symbolic meaning as jewelry, the bead clearly also conveyed the notion of perfection and was an outward expression of technological achievement and prowess.

The signs of wear on the bead indicate that it had been tied to a string and that it was used as jewelry for a long time. It was probably not used alone, for from what we know of ostrich eggshell bead production, it appears that more than one bead was produced at a time.¹ The initial production stage consisted of breaking the eggshell into pieces, drilling a hole in the center of each piece, and then further breaking the pieces into a more or less uniform size. The next stage involved threading string through the perforations and passing each piece of eggshell back and forth over a piece of stone, wood, or another hard material, rotating the bead until its outer edge became circular in shape. A similar production method is known from Africa starting in the Middle Stone Age, some 50,000 years ago,² and continues to be employed in traditional societies till this day.³

Ahiad Ovadia

1 See, for example, Hitchcock 2012.

2 Orton 2008; Miller 2019.

3 Hitchcock 2012.



Necklace (*Wasekaseka*)

Fiji Islands, late 19th – early 20th century, whale teeth and rope

L 10.5 cm (each tooth), W 28 cm (necklace)

Gift of the Faith-dorian and Martin Wright Family, New York,

to American Friends of the Israel Museum

IMJ B04.0461

Wasekaseka necklaces, worn by Fijian chiefs in the mid-to late nineteenth century, are among Fiji's best-known types of jewelry. As valued possessions indicating wealth and power, the *wasekaseka* were often also buried with their owners. These necklaces were made from segments of sperm whale teeth, which were shaped and polished until they reached the desired concave form. Prior to the arrival of Europeans and the introduction of commercial whaling in the early-mid 19th century, whales were not hunted in Fiji. Whale teeth were thus exceedingly rare, only available in small quantities. They were traditionally presented to high-ranking individuals as gifts or tokens of political support or solidarity. In addition, whale's teeth were seen as charms capable of calming tensions and settling disputes, and thus necklaces of this type were often exchanged between officials at important meetings or before assemblies of war.

Yael Eshel



Stone Boy

A Story by Dror Burstein

A. The first couple, Atlit coast, October 1974

She found it three hours before they were about to board the taxi that would take them to the airport, and from there back to their Massachusetts home. At first she noticed the head. She did not initially realize that it was a head, she only noticed the unusual color that stood out against the wet shore. The sun shone directly on the light greenish stone. She said, "Look over there, maybe it's an emerald." He said, "Don't change the subject." The subject was their divorce. Two months ago, when they left their home in Massachusetts, they hadn't discussed



Human-shaped pendant

see pp. 36–37

it yet. It came up for the first time during the flight from Boston (via New York and London). That was followed by two months on the coast in Israel. She had a distant aunt in Atlit. The plan was to pay her a short visit, around a week, but the aunt's son had been killed in action during the war that had broken out the year before, and for reasons that the guests failed to comprehend, his body was only now being transferred from a temporary grave to a permanent one. She wanted to ask what did it mean, a temporary grave, but she remained silent. They were practically the only mourners at the cemetery. And in the face of her aunt's loneliness, a simple thought entered the woman's mind, I have to start living immediately. In other words, she realized they had to separate.

During the funeral and the week of mourning, it was impossible to talk about it. The aunt approached them and said, "You'll be staying on a bit, right?" They stayed on for another week, two weeks, three weeks, until they absolutely had to return home. Practically no one came to console her. The man wondered, how was it that he didn't have any army friends. "They must have hated him," he said. He had apparently uttered this out load, because the mother of the fallen soldier, his wife's aunt, said, "You have no idea how right you are."

A few hours before the taxi that would take them home arrived, they went out for a final walk. The topic they'd been avoiding for the last three weeks erupted on the shore, as if they had been standing in front of a door and had to decide whether to open it or leave it shut. It erupted when she asked to sit separately on the plane. Their voices grew increasingly strident. "And what if someone sees us," he said. And then she noticed the small, emerald-tone marble and pointed to it, and he said to her, "Don't change the subject." The subject was their seats on the plane, in other words, their divorce. She turned her back to him and started walking along the shore toward the tiny greenish sphere.

B. Kfar Samir (southern Haifa) coast, October 2014

The diver didn't understand what he was seeing. On the seabed, seven meters below the water's surface, was a circle. In his youth – he was raised not far away, on Kibbutz Newe Yam – he had an uncle who devoted himself day after day to digging a round pit, in his attempt to reach the other side of the world. His uncle calculated – incorrectly, but that would only become apparent to him years later – that if he kept up the pace, he would reach America within five and a half years. Maybe six. The diver smiled to himself behind his mask, recalling his uncle and the pit, while swimming laps around the underwater circle.

The next morning he brought the marine archaeologist with him and they dived to the site together. When they came back up to the surface the archaeologist said that he thought it was a well. "An underwater well?" exclaimed the diver. "Yes," answered the marine archaeologist. "When the sea rises it drinks up everything." The diver persisted, "But a well?!" – as if there were something illogical about it, that salt water could flood and fill a freshwater well. The diver asked how many years the well had already been submerged below water. The marine archaeologist said, "Not long, practically yesterday. I'd say it was dug around 7,000 years ago, 8,000 tops." They continued sitting a little while longer on the shore. The archaeologist said, "I knew your uncle. Did he make it to America in the end?" The diver fixed his gaze on the water and said, "Yes."

C. Atlit coast, 7,800 years ago

I am standing here 7,800 years ago. The landscape is different. There are more birds, some of them don't appear in the bird handbooks because they're already extinct. There are far fewer people, no roads of course, no buildings to the east, no Crusader ruins, no cellular antennas, no remains of detention-camp cabins. The air is clean, it's a bit less warm. The Templers will only construct their fortress in 1217, in other words, 7,000 years in the future. There's time. But the most conspicuous change is the distance of the sea. The sea level is seven–eight meters lower than it is today, and therefore the sea is farther away, some 150 meters to the west. What in the twenty-first century is covered with saltwater is now shore. At the edge of the shore is a small sandstone hill, which stands out prominently. With my binoculars, which haven't been invented yet either, I can see a woman on the hill weaving a reed basket, with a man beside her hunched over his work. What's he doing over there? Mending something? Sewing? Chiseling?

D. The first couple, Atlit coast, October 1974

She noticed the eyes. She bent down. The head was buried in the sand. Protruding. The boy looked up at her from his burial site. A breeze rose from the sea and struck her as it would the wall of a tent. She looked back. Her husband stood there staring, waving his arms and pointing to his watch as if to say, "How much longer do I have to wait?" and "We'll be late for the airport." She shouted out, "I found something." He shouted back, "I can't hear anything you're saying, you may as well stop shouting."

Afterward they walked back to her distant aunt's house, and every so often passed the figurine, which they had washed in sea water, back and forth. It was a human figure, and she said, "It's a boy. Look at its large eyes, the large head, the expression. Grown-ups don't have that kind of look in their eyes." She looked at him. Suddenly he understood: grown-up eyes cover up the earlier ones.

They were childless. There had been a few attempts, they only caused pain.

He said, "Let's wrap it up, pack it in the suitcase, and sell it in Boston. Maybe it's worth something." She didn't respond. He said, "We'll wrap it in newspaper. Hopefully customs won't catch us." After a moment of thought he added, "We'd better put it in your suitcase. They're less suspicious of women. I could lose my law license."

The figurine was in her hands, and he reached out to take it. She didn't give him the child. She slowed her steps and allowed him to get ahead of her. "I found him," she said. He didn't hear her because of the fierce wind and said over his shoulder, "Who knows, maybe we could get a good \$500 for it. Maybe even \$1,000. The color really does resemble dollar bills, doesn't it?" He turned around. She was no longer there. Neither she nor the green child she held in the palm of her hand.

E. The second couple, Atlit coast, 7,800 years ago

The infant was born near the sea, on the hill at the edge of the dry land. When he cried his mother would sit with him opposite the waves like all the village mothers. They said he was crying because of his teeth. Where are his teeth, she wondered. Why aren't they already born with teeth? And how do they know how to cut through the surface, what makes them come out? She asked around her small fishing village. No one knew. But they told her what she already did know, that in one of the nearby villages was a woman who knew things like that. The village was half-a-morning's walk away, walking with the sun on the right cheek (they pointed to her cheek and then north, there were not yet words for right and left or for the cardinal points of the compass: there was the direction of the sea, which had a special word, and the rest of the directions). The knowledgeable woman knew how to prepare an ointment for easing teething pain.

All the young mothers go to her, they told her. That is, the mothers whose babies survive long enough to suffer from teething pain.

Her baby had already been around, carried on the back of the globe and the village, alongside the sea and other people, one turn around the sun. There was a bird that would arrive once a year, small and fast and high, and the mother noticed that this was the first time the bird had returned since he was born. The boy's name was same as the word in their language for this bird. It was named for the high-pitched sound it made, something sounding like *tsits* or *sis*. She noticed that the bird never touched ground. She wanted to ask about that as well.

She left early in the morning in the direction of the village, with the infant on her back. She walked along the shore, the waters' edge serving as her guide. The sun rose on her right. When she shifted her gaze from the light, her partner,

the infant's father, was beside her. It hadn't occurred to her to wake him. But he ran after her and joined her.

F. Atlit coast, 7,500 years ago

Far away, deep in space, the sun intensified its activity. The volcanos on the other side of the earth released carbon dioxide into the atmosphere, forests went up in flames, and somewhere in the north glaciers melted, at first gradually, and then collapsing in great chunks into the northern sea. Slowly, the water level rose. No one noticed this change during his or her brief lifetime. I returned to the village after three hundred years, but there's nothing left, only the sea. And the sea, much higher now, had eaten away a wide strip of shore like a whale. Where is everyone? The boy, where is he? His parents? The well?

G. The Israel Museum, Jerusalem, 40,000 years from now

For a few dozen years it was still possible to see the Old City walls and several of its buildings covered in ice, which had advanced slowly from the north, gradually gnawing away at everything. The few nomadic humans who still lived there and wandered about in small, shivering bands would sometimes pass the odd, ice-eaten ancient Turkish walls (no one at the time knew that there had ever been a country named Turkey, no one had ever heard of Suleiman the Magnificent, and Turkey itself was a vast stretch of ice, all of its libraries and palaces having lain beneath ice for thousands of years), tattooed by ice as if by a merciless invading army from the north, slowly, effortlessly. No one knew who had lived there before, and how long most of the city had been covered in ice. The low-lying parts of the city had entirely disappeared, and most of the hills were completely covered in ice, which had ground into rocks everything that had been built on top of them over thousands of years. Only a few hilltops with their odd structures still protruded like islands from the white, partly translucent sea.

Year after year, century after century, animals and birds migrated here from the distant north. The Arctic Circle expanded immeasurably. Wolves have been roaming over the city for thousands of years, predatory birds, in dark shades and white, hover on high, waiting for carrion left by the wolves, northern geese wander and musk oxen search for vegetation, light-colored bears slip on the ice, chasing the snow foxes above what used to be neighborhoods and a museum, above roads and interchanges, the existence of which, had they been known

to anyone – but no one will ever know of them, no, never – would have been regarded, undoubtedly, as a beautiful legend.

H. The second couple, Atlit coast, 7,800 years ago

They arrived at the northern village. Even though it had been a short walk, and the sun had still not reached its highest point in the sky, this village belonged to others, and they spoke a language that was similar to theirs, but different. Neither of them had ever been there before. There was someone whose job was to go there from time to time to fetch water for their village. The woman they sought was sitting in the center of the village, which like their village was located atop a sandstone hill near the sea. Now, for the first time, they saw what they knew was here, but which their village lacked: the circle.

This was a freshwater well, and it was dug on the instructions of the knowledgeable woman. She knew there would be water there. Its upper walls were stone and branches. The inhabitants of the well-village would sell water to the inhabitants of the other villages in exchange for fish and other things. The well had made them lazy. They didn't go out to fish, they quickly forgot how to lay fish traps and carve flint arrowheads. All visitors paid the knowledgeable woman, the healer, in food and jewelry. She unwittingly accumulated most of the objects she received as payment.

The well-village grew richer and richer, larger and larger. Its inhabitants lolled about the beach in the sun, dozed and woke up, chatted, bathed in the sea for pleasure as long as it wasn't too cold, and it usually wasn't.

The father handed a large fish to the woman and a smaller fish to the man standing near the well. The couple received drawn water to drink and a few olives. The father ate an olive and spit out the pit to the side, and the pit was carried off by the strong wind and fell, to his alarm, into the well. Some time passed until he imagined hearing it strike the water.

The healer asked something, and the water-drawer translated. She asked what the infant's name was. His mother replied. The translator explained something to the healer. The young mother pointed to the sky. Yesterday the bird after which the child was named had flown by and then dropped low. The bird floundered in the air as if it had been hit by something, landed on the beach, and couldn't fly up, a sand fox caught it right away. She hadn't told them about it. Not even her partner.

The healer woman stuck her finger into the child's mouth. He didn't cry. She felt around. There was a tooth trapped in the lower jaw that had not yet cut the surface. And she knew right away – she always knew right away – that the tooth wouldn't cut the surface and that the child would continue to cry, and that he would die. She gave the father of the child a pottery vessel with a spout containing an ointment for gums. The father didn't understand. She told the translator that he must break the vessel and bury it with the child, that this was the custom. She gave the mother a flint flake and said something about the flake and the tooth, that she was to place the flake in the mouth on top of the trapped tooth, to insert it forcefully into the gums after the child died. The translator didn't have the heart to translate her words. He said they should apply the ointment every night with the flake, at sunset, and didn't elaborate.

They applied the ointment even before they left the well-village, and the toothache passed that very day. The healer hadn't been precise. The child lived for another full year, until his birds returned. But one morning when he was two, he was snatched by the sea while crawling on the beach and was swallowed up. After a few hours, the sea spewed him back out, as quickly as it had swallowed him up.

I. Haifa bay, five million years ago

The sea we call today the Mediterranean is a dry desert from one end to the other. What we call islands are the tops of mountains – Sicily is a mountain, Corsica a towering summit, Crete a mountain range. In the distance one can see a few desert nomads, not exactly humans like us but not apes either, moving in a long caravan from mountain to mountain over land that we will one day call the seabed. A sharp salt smell is noticeable everywhere, testimony to the site's past and a prediction of its future. No one knows anything about this. Large, two-humped wild camels pause from time to time to bend down and lick a bit of salt from the endless deposits.

A volcano not too far away emits a continuous stream of smoke. No one notices.

J. The aunt, Atlit, October 1973

Her son had served in the Navy, and the officer who came looking for her arrived in a naval boat. She met him on the beach, by chance. He was wearing

a white uniform. The wind snatched up his cap, revealing reddish hair. He asked if she knew the mother of so-and-so, a soldier, and she answered yes, I believe that's me. He looked back at his empty boat, awkward and unnerved. She turned for home, without waiting for the message. She knew. Before he was born, during her ninth month of pregnancy, she dreamed that he would drown, and she knew that her dream had now come true.

K. The second couple, Atlit coast, 7,800 years ago

They buried him not far from where the sea had spewed him forth, dead. His mother lay the flint flake next to him. She hadn't understood why she had been given the flake, but she didn't want to keep it. The pot with the ointment fell from the father's hands onto the sandstone and broke, and the ointment was contaminated. They no longer needed it anyway (though she would give birth once again, in two years' time, and the girl would live and thrive, and her teeth would hurt, too).

They lay the wet child down so that his head faced the village of the knowledgeable woman, where the well was. The father remembered the olive pit that fell from his mouth into the well and thought, I contaminated the water, and the water took revenge on me and killed him. They took a little seawater in a bowl and poured it over the child's head. The sea was god, and with this libation they hoped he would watch over their baby even after he was buried in the earth. Then they placed the bowl near his head. The waves did not cease for even a moment. People there said that this was a good sign.

L. The Israel Museum, Jerusalem, 40,000 years from now

The ice plateau broke off instantly, like a sudden waterfall. The block of ice became a ravine, perhaps due to the ancient earthquake that shook and tore the ice crust. The ice was sliced crosswise like a loaf of bread. For as far as one could see, to the left and to the right, lay the ice sea and the ravine. The travelers tried to go around it, in vain. The scouts returned after a few hours – had it not been for their dogs they wouldn't have returned at all – and reported that it went on and on. There were no longer words like “kilometer” or “hour” in those days. They couldn't define how far it was. Distance was indicated by three terms: near; not near but walkable; very far.

There was no choice. The youngest one, an eighteen-year-old, was chosen to descend into the frozen ravine to check whether it was possible to scale the other side. If he succeeded, the others would follow. He used picks and a hammer and ropes and began his slow descent. The cold increased. He expected to reach bottom, but it was taking a long time to appear. He no longer saw his fellow tribesmen. His parents had died long ago. That's why they sent him. It suddenly dawned on him.

His rope ended suddenly. He could have tried to climb back up, but he freed himself and continued his descent, using his deerskin-gloved hands and his feet. His sparse red beard was so completely covered in ice it looked gray.

When he finally reached bottom he stopped to rest. He leaned on the spot where the ravine's wall ended. Not far away he could see the other wall. Its upper edge was impossible to see.

Within the glacier's practically transparent wall, a greenstone figurine of a child was trapped, its head upside down. The youth struck the wall with his hammer in order to extract the figurine. He had never seen anything like it. No one around him ever made such things, only hunting tools and other useful items. He imagined that it was ancient, from even before the Ice Age. But the glacier wall was thick and hard as rock, and he was unable to dig the child out.

M. The first couple, Atlit, October 1974

He didn't find his wife that entire day, nor did he find her the next. He sat in her distant aunt's house in Atlit and thumbed through a photo album. Her son had been a diver and swimmer, and most of the photos showed him in the water. Here and there a neighbor dropped by. A military commander came, read something off a piece of paper, and left.

Late on the night of the next day his wife returned empty-handed. She had run into a team of excavators from the Department of Antiquities and handed over the stone boy to the head of the team. She said that they all stopped working and came over to see it. She told them she was a tourist from the United States. One of the excavators was a local who seriously planned to dig a tunnel from his yard to the United States, and he asked her, in heavily accented English, where she was from in the States, and told her his plan.

Afterward she went home with him to sleep.

N. The second couple, Atlit coast, 7,800 years ago

Now, after the burial, when there was nothing else left to do, she rose and faced the sea. She is standing on a spot that is swimming distance away today, called "Octopus Island." Suddenly she begins to walk, in a straight line, into the water. She feels the tide caress her ankles and calves. The waves want to break on the shore but the strong undertow pulls them back to the sea. That's where her son was taken as well.

She continues walking straight into the sea, the water already hugging her waist. If there's a place deep in the sea where her son is, she also wants to be there and see it.

He appears beside her once again. He runs in from the shore. For those gazing from the shore it looks as if he were walking on the waves. He doesn't need to catch her. She stops. They stop. He hands her something, she doesn't look at it, only feels the carved, polished stone, which still holds onto some of the warmth from her partner's hands. He had just then finished carving it, adding eyes to the face and opening the smiling mouth with a single stroke. He made it to resemble her. He tried.

The water is not yet very deep, and the tide ebbs. They remain there a little longer and then return.

Translated from the Hebrew by Nancy Benovitz

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