made elsewhere. She refers to examples of Athapaskan beadwork from Russian collections, and seems to assume that the beads must therefore have come from Russian traders. Prominent among these pieces one sees the large faceted blue necklace beads which have often been so described. It is known that the Russians did make beads, but there also seems to be evidence that some of their trading stock came from Bohemia and perhaps even Venice as well. It is probably outside the perimeters of Duncan's study to answer this question, but it is to be hoped someone will try to find the answers.

Another matter that is central to her subject, though, is the introduction of floral design. She rejects the idea that everything was due to French influence and says "Sources are far more diverse, with significant roots in the British Isles, Scandinavia, and even Middle Europe...." In a footnote, she mentions more specifically English, Swiss, Norwegian, Icelandic and Galician (Ukrainian) women in the Red River area as possible sources of influence. There certainly were English and Swiss women in Lord Selkirk's colony, but my own impression is that the other national groups didn't arrive in any numbers until the late 1870s, and then tended to live in homogeneous enclaves interacting only minimally with persons of other ethnicity. Today, there is renewed interest in native North-American floral design and a more extended discussion of possible origins and influences would have been welcome.

Finally, there is the much-debated matter of "Metis" beadwork style. Duncan cites historical references to persons so identified in the western Subarctic, but points out that native people there do not so categorize themselves today. These same people say there is, at least today, no difference between their works and those made by others claiming mixed European and Native ancestry. The point made here is that this is a topic calling for further study.

In summary, here is an excellently researched and published book which is strongly recommended to all. Given the paucity of literature on Subarctic arts,

Duncan has gone a long way to clarify identification and dating of objects as well as providing insight into the lives and motivations of the beadworkers themselves. Don't miss this one!

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Proceedings of the 1986 Shell Bead Conference: Selected Papers.

Charles F. Hayes III and Lynn Ceci, editors. Rochester Museum and Science Center, Research Records 20, 1989. xi + 206 pp., 90 figs., 20 tables. \$15.00 (paper).

Most of our readership is familiar with the high-quality "Proceedings of the 1982 Glass Trade Bead Conference" previously published by the Rochester Museum and Science Center. This volume continues the tradition of research excellence by presenting selected papers on shell beads from the 1986 conference. The topics are quite varied, ranging from a survey of bead manufacturing techniques by our past president, Peter Francis, Jr., to numerous regional studies on Iroquoian shell ornaments, wampum, Mississippian shell-bead production and exchange, Mayan and Andean beads, Paleolithic beads, and bead conservation. Abstracts of eight papers presented at the conference but not published are included in the volume. The volume is dedicated to the late Lynn Ceci, a pioneer in the study of shell beads, especially wampum, among the Iroquois.

The papers can be divided into several groups: the identification and conservation of beads and bead manufacturing techniques (5 papers); shell ornaments, including wampum, among the Iroquois (6 papers); shell beads in Central and South America (2 papers); ancient Old World shell beads (2 papers); and miscellaneous (3 papers).

Jane Topping presents an introduction to the identification of the molluscs used in the manufacture of shell beads and other ornaments. This paper reveals the wide variety of shells used to make ornaments, and provides an excellent discussion of the classification of molluscs which serves as a good background to the papers on particular beads.

Nancy Davis discusses the deterioration of shell artifacts in museum collections, and provides information for the proper preservation of shell artifacts. Her paper is important to any institution or individual with a collection of shell beads.

Cheryl Claassen discusses chemical characterization of shell in an attempt to determine places of origin for shell artifacts. This paper is essentially an update on research in progress, but is important in showing how shell ornaments will eventually be useful in tracing exchange patterns.

Peter Francis, Jr., describes the numerous techniques for shell-bead manufacture in his thorough and well-illustrated paper. His classification scheme is based on both observable characteristics of shell bead specimens, and on his own replication experiments.

Charles Hayes provides an introduction to the shell-artifact collection of the Rochester Museum and Science Center. The museum has excellent holdings of prehistoric and historic-period Seneca-Iroquois shell artifacts, many of which are illustrated by excellent photographs, and outstanding drawings by Gene Mackay.

Lynn Ceci traces the origins of wampum, pointing out that beads very similar to wampum in shape and the type of shell utilized can be found in Middle Woodland (A.D. 1-1000) archaeological sites in New York. She gives an excellent period by period categorization of shell usage in prehistoric New York. In a somewhat related paper, Martha Sempowski traces the use of shell ornaments among the historic Seneca Iroquois by studying the excellent collections of the Rochester Museum and Science Center. Different styles of shell ornaments, as well as differences in shell artifact frequency, are shown to characterize different periods within the 16th and 17th centuries.

James Pendergast provides a detailed look at the types of shells utilized by Iroquoian Indians, and

discusses mechanisms by which the Iroquois obtained shell in trade with coastal peoples. He sees shell trade as coming from the Chesapeake Bay area, a trade stimulated by the early trade in European goods in the 16th century. The Susquehanna and Potomac rivers acted as major arteries for the spread of shell into the interior.

Richard Yerkes discusses the production and exchange of shell beads among the Mississippian (late prehistoric) peoples of Illinois. He evaluates the evidence for the manufacture of shell beads as a craft specialization, and concludes that while beads may have been used as tribute with production controlled primarily by the elite, there is no evidence of full-time craft specialists.

Julie Hammett and Beverly Sizemore discuss shell ornaments as socioeconomic indicators using a sample of specimens from the Carolina Piedmont. They document change in shell-ornament form from the prehistoric to historic period, and make interesting comparisons with beads used in prehistoric California.

Hattula Moholy-Nagy analyzes shell beads from the important Maya center of Tikal, Guatemala. The changing uses of shell beads through time at Tikal are examined. Spondylus-shell beads consistently functioned as high-status markers, although the forms changed through time, finally disappearing in the Post-Classic occupation. White and nacreous shell appears in a wide range of contexts during the Intermediate and Late Classic periods, indicating that their use was not restricted to the elite.

Ann Mester discusses marine shell symbolism in Andean culture. While others have analyzed the Spondylus shell that is so frequently found in Peru, Mester focuses on the little-known pearl oyster. She sees a symbolic connection between pearly shell, which breaks up light into its constituent colors, and precious metals and quartz crystals. All three of these items are related to the sun, and symbolize a celestial complex which symbolizes "moral excellence, societal replication, and the role of the Incaic royal dynasty as generator of social well-being." This complex is viewed in opposition to a terrestrial complex symbolized by the red Spondylus shell.

The use of marine shells as cultural markers in the late Paleolithic and Neolithic of the Southern Levant is the subject of the paper by Daniella E. Bar-Yosef. The changing utilization of shell species through time and the increase in long-distance trade is carefully documented in this paper.

Nigel Goring-Morris investigates sociocultural aspects of shell use during the terminal Pleistocene in the southern Levant. Early hunters and gatherers utilized distinct assemblages of shells which correlate nicely with stone-tool assemblages. During the later portion of the period under study, with the advent of more complex sedentary peoples, shell use dramatically increases.

Stuart Fiedel provides a most-interesting discussion of the use of ornaments in hunter-gatherer burials in his cross-cultural study. He points out that many archaeologists would view the use of shell ornaments as evidence of ranked societies, particularly when they accompanied subadult burials, but through careful analysis, Fiedel demonstrates that many egalitarian societies provide rich burial accompaniments for children. Richly furnished child burials need not imply ascribed status, and this is an important lesson.

Finally, Paul Williams discusses the history of Grand-River-Iroquois wampum belts. Many of these belts were sold by individual Iroquois at the beginning of the 20th century to large museums in the eastern United States. Since that time, other Iroquois have attempted to have the belts, viewed as tribal property, returned. This paper ends with an appended note that the Museum of the American Indian, Heye Foundation, has returned eleven belts to the Iroquois people, and that the Royal Ontario Museum is considering returning wampum in its possession. The story of the return of these belts is told in an article by William Fenton in the journal, Ethnohistory (1989, No. 4).

I found this to be an excellent volume, certainly a must for anyone interested in the use of shell beads in archaeological analysis. The papers are well-edited and the illustrations are first quality. The subject matter is quite broad, and there is clearly something for everyone. This volume is a fitting tribute to the

late Lynn Ceci, the prime mover for this conference. It comes highly recommended.

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The Ubiquitous Trade Bead.

Anita Engle. Readings in Glass History No. 22, Phoenix Publications, Jerusalem, Israel, 1990. 100 pp., 26 figs., 5 color plates. \$20.00 (paper).

Anita Engle is the doyenne of glass historians in the Middle East. For nearly 20 years her series of Readings in Glass History has provided information on the history of this material often not available elsewhere. Her work is always interesting, frequently stimulating, and sometimes ground-breaking. Although often difficult to locate and rarely cited by other writers, much of her work is worth seeking out.

In this volume, however, she has perhaps bitten off more than she could chew. It appears to belong to some sort of time warp in which bead studies have not advanced much beyond what they were in the late 1960s. Most of the bead sources on which she relies are either of that period or secondary references which rely heavily on older published findings. As a result, this volume fails to advance bead studies.

In the introduction, Engle outlines what she perceives as the problems with bead research. On p. 5 she says: "As archaeologists have long known, bead finds are inadequately recorded, if at all, they are undateable, even when found in stratified circumstances, and, with one notable exception, they are hopelessly unprovenanceable."

Perhaps such a statement could have been written with confidence a few decades ago, but with the increased interest in bead studies around the world and a dozen or more years of intensive work by many people, it is no longer tenable. Many beads found in a