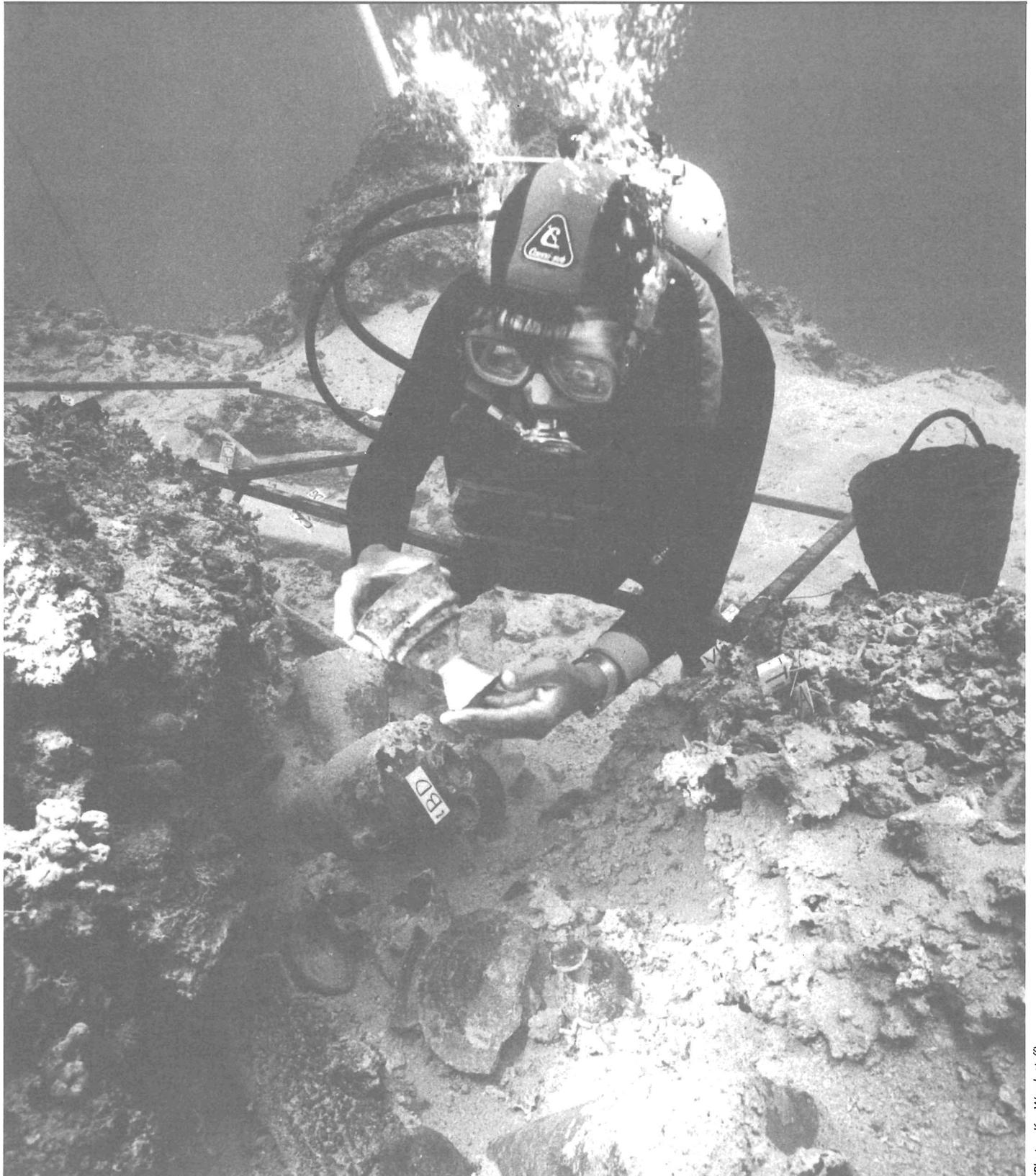


INA NEWSLETTER

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(Photo: Kaş Wreck staff)

A Remarkable Discovery

The Bronze Age



It is the oldest shipwreck ever excavated, dating at least to 1400 B.C. After only one field season, it already has yielded the richest and most culturally revealing ancient cargo ever recovered from the Mediterranean, having among its 3,400-year-old debris items made of gold, silver, bronze, copper, tin, glass, ceramic, stone and organic materials. It also may be harboring extensive hull remains which could be the most priceless artifact of all. INA Archaeological Director Dr. George F. Bass has called the Bronze Age Shipwreck at Kaş, Turkey, unequivocally the most exciting and important vessel site ever found in the Mediterranean.

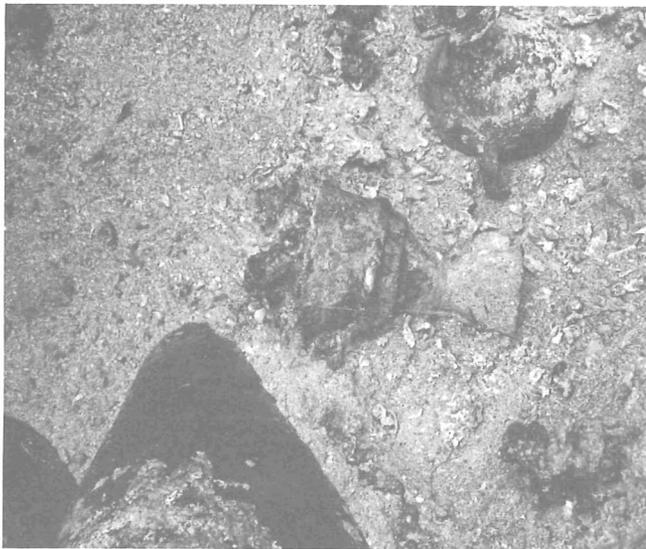
For Bass, the excavation he began directing in June 1984 with the assistance of INA Research Associate Cemal Pulak and with support from the National Geographic Society also represents a certain culmination of his life's work as a nautical archaeologist and a Bronze Age authority. Twenty-five years ago he pioneered his now well-established profession with the excavation of a nearly contemporaneous site at Cape Gelidonya, a mere 45 miles east of the current find (see map, page 5). That site, however, about 200 years younger, was far less generous in its complement of surviving cargo and hull, and ultimately it posited as many questions with its study as it provided answers.

Thus, when Bass departed from College Station last summer to begin work off the barren cape at Ulu Burun on the southwest coast of Turkey, he says he not only had specific research questions in mind but also certain hopes about the nature of the forthcoming data. Recently he reflected on some of his expectations, on the subsequent surprises, and on the process of unravelling the mystery of this remarkable Bronze Age vessel.

Bass: I went to Kaş hoping that we would find additional traces of cargo underneath the rather promising selection of artifacts we'd already seen on the seabed. Because of the evident remains, it appeared that this might be an early Canaanite [Phoenician] ship that had sailed from the Syro-Palestinian coast to the west for purposes of trade.

This possibility was very exciting to me. After the Cape Gelidonya excavation, I had made some postulations about Canaanite trade patterns based on the scant but suggestive material remains. Specifically, I was countering the long-held suggestion by Classical archaeologists that the Mycenaean [Late Bronze Age] Greeks had maintained a monopoly on Eastern Mediterranean trade, a claim made primarily because their pottery is found all along the coast. I proposed instead that the Greeks more likely were trading partners with other nations in the area and, in fact, may have been primarily manufacturers who received imported raw materials from traders such as the Syrians. Thus, when we started the Kaş Wreck excavation, I was rather hoping that the ship might support these ideas more conclusively.

It is too soon to tell whether the Kaş site will confirm Bass's theories or necessitate entirely new explanations about Bronze Age trade in the Mediterranean. What is clear, however, is the fact that the eclectic and unparalleled assemblage of artifacts coming from the wreck—from precious to commonplace, from utilitarian to unfashioned—is a potential



A finely crafted gold goblet is removed from its resting place of 3,400 years (cover, top). No less valuable was the two-handled Mycenaean pottery cup found next to the goblet (bottom), seen as the two objects were found in situ. The ceramic artifact helped to date the Kaş Wreck site to the 14th century B.C. or possibly earlier. (Photos: Kaş Wreck staff)

Shipwreck At Kaş

treasure trove of information. According to the scholar, the value of the vessel, which is being excavated by INA with the cooperation of the Government of Turkey, lies less in the precious fabrics of the surviving artifacts than in their form.

Bass: In addition to personal effects which have intrinsic or historic value, what we are finding is an enormous cargo of raw materials that is unprecedented in the annals of ancient history. Because it contains the influences of three separate cultures, this shipwreck is a dream come true for historians and archaeologists studying the birth of commercial trade and industry in the Mediterranean. I believe we are going to learn an incredible amount about the interaction among Syrian, Greek, Cypriot and neighboring cultures of the 14th century B.C. as we begin to study this site thoroughly.

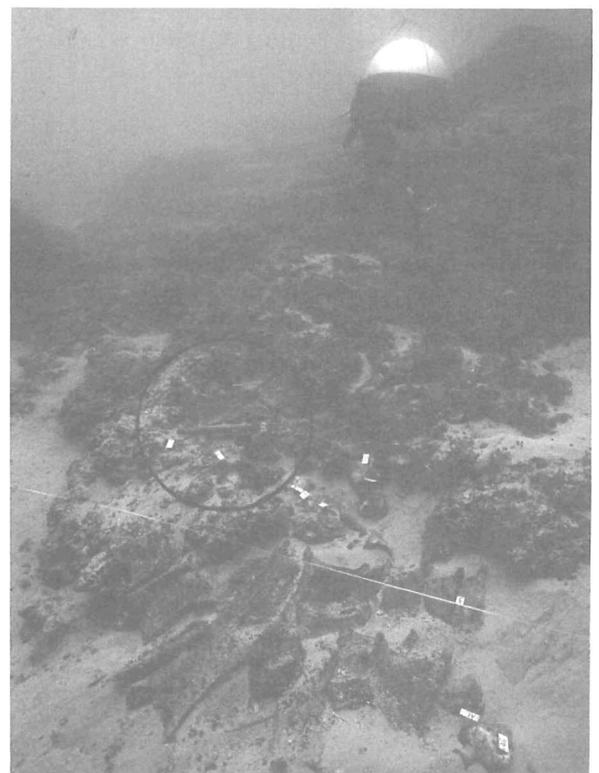
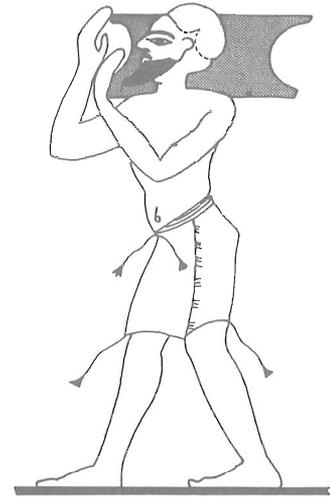
Already the shipwreck has given up secrets about marine technology of the era. From the small section of keel and planking that was uncovered and examined last summer, Bass and his colleagues have determined that the same shipbuilding technique used by the ancient Greeks—the method of shell-first construction—was in use a thousand years earlier by shipwrights of the Bronze Age. This fact alone is a significant discovery, Bass says, because it advances knowledge about early shipbuilding by a millenium.

Although only twenty-five percent of the site was excavated in 1984, project archaeologists estimate that the ship was about sixty-five feet long and possibly carried a single square sail. Its keel was built of fir. As to its route, Bass believes that it may have sailed from Syria with a load of tin, stopped in Cyprus for a load of copper, and possibly was heading for Greece or western Turkey when it met its demise at Ulu Burun. The location of the shipwreck, only seventy yards offshore, may reflect maritime caution by early navigators who hugged the coast under sail rather than taking open-sea shortcuts.

Apparently, the vessel was driven onto rocks at the base of the cape as it attempted to round the peninsula. It sank without capsizing onto a slope that ranges from 145 to 170 feet deep—a factor that no doubt has protected its bones from time, tide and humankind for thirty-four centuries—and settled in such a way that some of the cargo remained in place as it may have been loaded on board.

Indeed, strewn in rows like overlapping playing cards, the ship's consignment of large metal ingots was among the first features noticed by Turkish sponge diver Mehmet Cakir, who discovered the shipwreck. When he later described the site to INA President Don Frey, in fall 1982, Cakir referred to large jars and "metal biscuits with ears" that littered the seabed. For Frey, who has been tracking sponge divers' leads to ancient

"Biscuits with ears" was Mehmet Cakir's telltale description of metal ingots he had seen on the shipwreck site at Kaş, similar to those depicted in tombs at Thebes (top) dating to 1350 B.C. About 150 of the four-handled slabs, nearly all of copper but some of tin, were recovered during INA's 1984 excavation season. Comprising the raw materials needed to manufacture bronze tools and weapons, the ingots were dispersed on the seabed among other artifacts (center) or were neatly stacked as they might have been aboard the vessel (bottom, foreground). The circled area in the lower photograph is seen in close-up above. (Photos: Kaş Wreck staff)





shipwrecks since 1980, Cakir's innocuous description of the four-handled slabs was an important and familiar clue.

The following summer, a team of INA and Turkish divers examined the site and confirmed that it was of Late Bronze Age vintage, probably from the early 14th century. Similarly, the archaeologists ended their reconnaissance with hints that the vessel might be Canaanite because of the large storage jars, called *pithoi*, on the site; parallels for these have been found in Egyptian tomb paintings that show Canaanite trading ships from Syria with *pithoi* on deck. However, confirmation of where within the Bronze Age period the shipwreck dated, and from which culture it might have emerged, remained matters of speculation until last summer's excavation season.

Bass: Ultimately, we dated the site with several artifacts, among the first of which were the ingots. About 150 of these oxhide-shaped items, weighing about three tons, have been found; most are of copper but some are of tin, and together they comprise the raw materials necessary to manufacture bronze. These ingots are very similar to those depicted in Egyptian tombs at Thebes dating from the 14th century B.C.

Another age indicator was a small ceramic cup, about which there is a certain irony. By far the most intrinsically valuable artifact we have found is a five-inch-tall golden goblet. This piece is very lovely, but as a tool for dating the site it is useless because it bears no markings or inscriptions. However, lying immediately next to it was a treasure of a more humble sort: a simple, two-handled Mycenaean Greek kylix which we could date to within twenty-five years of 1375 B.C.

Identification of the origin of the vessel has not been so certainly established because of the international nature of the cargo. In addition to Greek and Canaanite pottery, Cypriot examples also have been found, some of which were stacked intact in the large, 5½-foot-tall *pithoi*. Within some of

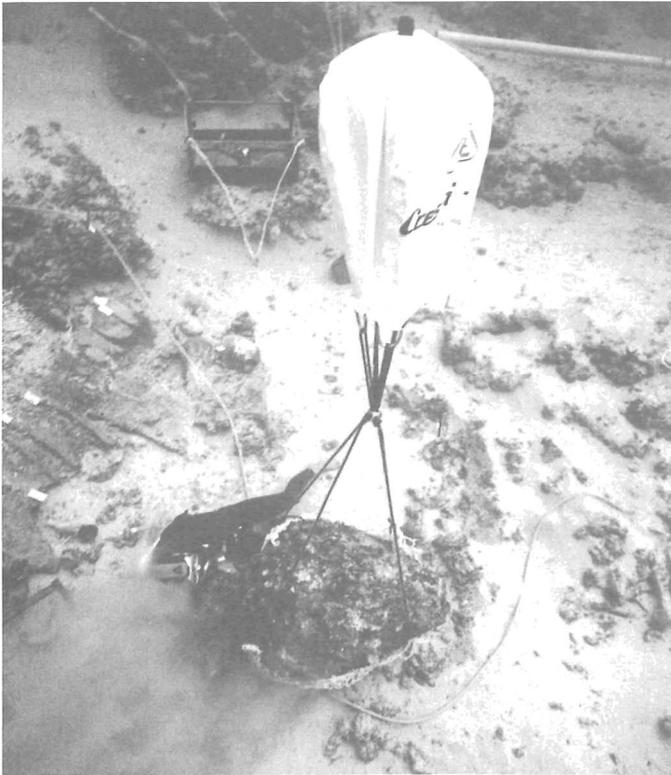
the thirty-six Canaanite amphoras recovered, an array of trading products was discovered—glass and amber beads, pitch, an arsenic compound called orpiment, and several varieties of seeds. Overall, most of the 235 catalogued artifacts appear to have originated in the Syro-Palestinian region, supporting Bass's hunch that an active exchange of trade goods was occurring across the Mediterranean. However, certain other items, in particular, one of Greek origin, leave the vessel's nationality a problematic matter.

Bass: We found a small stone seal, about the size of a button, which is similar to other examples we know were used by Greek merchants to stamp their personal seals on merchandise. It is entirely possible that this personal seal belonged to a Mycenaean merchant who was accompanying his purchased goods along the southern coast back to Greece.

The collection of other personal possessions—finished bronze weapons, gold jewelry, ceramic lamps—is no less puzzling. For example, next to the Mycenaean seal we found a Canaanite necklace. What does this mean? Certainly, we will have a better idea when we determine where in the vessel the living quarters were located and thus which items probably belonged to captain and crew and which were specifically trade goods.

Among the more extraordinary items of cargo were two dozen cobalt-blue glass ingots, seven inches in diameter and two inches thick, which Bass believes were destined to be made into fine jewelry or drinking vessels. They are the earliest examples of glass ingots ever found. Perhaps the most curious items discovered were a squared-off section of elephant tusk and a hippopotamus tooth. Bass believes that the first of these was to be used for a carved cosmetic box, known to have been a favorite possession of Mycenaean Greeks of the period.

The heaviest objects found on the site—eight stone



anchors weighing 600 to 800 pounds each—ultimately may be the hardest to explain. While one would expect that they had been put on board by some form of block and tackle, the earliest known reference to the pulley dates to the 9th century B.C., a half-millennium after the Kaş Wreck was lost.

One would think there could be no better state for a nautical archaeologist than to be blessed with the shipwreck project of a lifetime: fabulous artifacts, priceless surviving hull remains, scholarly puzzles and potential changes to history books—a dream come true. Bass probably would confirm this to a point; but he also would acknowledge that four more years of excavation will be necessary on the Kaş site; that an additional fifteen years of study and reconstruction then will be required; and that the shipwreck's notoriety and significance will keep his telephone jangling off the hook, as it has since the discovery was announced last December. Nonetheless, Bass says he faces these facts with anticipation and an open mind.

Bass: I have never worked on a shipwreck where there was such a constant state of excitement. Last summer, it was because of the unexpected finds; I mean, it got to a point where every day someone was bringing up something wonderful. Since then, the discoveries have continued as our staff at the Bodrum Museum, where the artifacts are being treated, has begun to examine some of the concretions we recovered in the field and to find even more precious items. And now, we are just beginning a second field season, and who knows what that will bring.

I have to say that my attitude has changed since I began this project. When I went into the field last summer, I was hoping I could find evidence to support my theories about Bronze Age trade in the Mediterranean. Now, however, I am not out to prove any particular point; I only want to find out about the past. I'm going to let this little shipwreck take us on a voyage of its own.

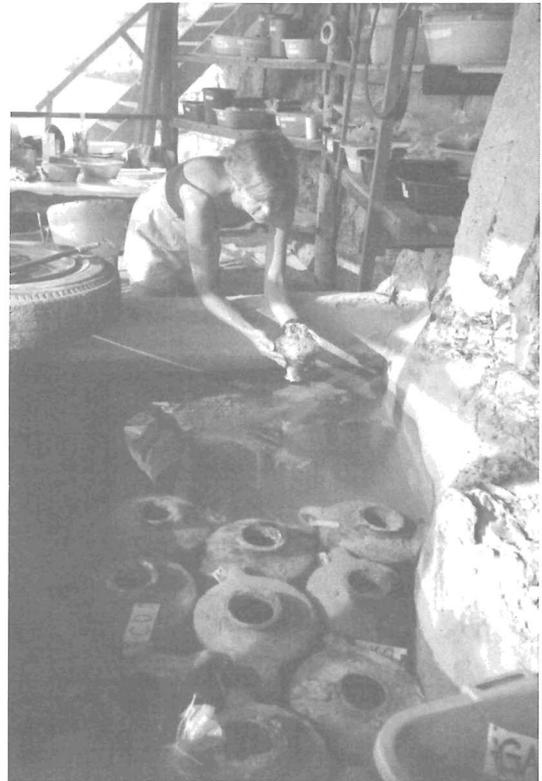
KC Smith

At work on the Kaş Wreck during the 1984 field season, archaeologists set a metal grid (left) to facilitate recording and excavation of artifacts. Stereophotographs taken of shipwreck features (center), such as this collection of metal ingots, are used in the preparation of a precise site plan. Later, a large storage jar is readied for lifting to the surface (right) with the use of an air-filled bag. Below, sediments surrounding artifacts are carefully sucked away by an airlift. (Photos: Kaş Wreck staff; Map: National Geographic Society)



Artifact “First Aid” A Challenge at Kaş

By Lisa Shuey



Once an artifact is raised from the seabed, the job of the cataloguer-conservator begins. Sometimes laborious, the work also can be exciting and even thrilling—particularly when the artifact lab is being filled with a distinguished Bronze Age collection that increases in size with nearly every dive. Months of conservation and years of study at the Bodrum Museum await the materials recovered last summer; however, important, immediate steps were required to deal with the artifacts while we were working at the site.

Given the restrictions imposed on a field lab that is perched on a rocky slope miles from a source of fresh water, our conservation objectives at Kaş were more in the line of first aid than complex preservation treatment. Our main concern was to assure that all artifacts were labeled, recorded, and stabilized so they could be shipped undamaged to Bodrum aboard the *Virazon* at the end of the season. The artifacts had to be soaked completely in fresh water to leach out chlorides and thus to prevent crystallization and surface flaking when they dried. To this end, conservation was devoted largely to monitoring the artifacts through a series of salt-to-fresh water baths.

As on past INA excavations in Turkey, most of the materials were stored in large cinderblock basins filled with water that was brought in daily by boat. Three tanks were sufficient for treating the copper ingots and most of the Canaanite amphoras; the remaining amphoras were kept in plastic garbage cans, which occupied most of the floor space in the lab. All other artifacts were placed on shelves in colored plastic basins, the result being a lab that looked more like a Turkish plastic bucket store than a conservation facility.

Each morning and afternoon after dives had been completed, buckets of finds in labeled plastic bags were brought into the lab to be processed. Ceramic vessels and sherds, wood, and metal concretions were placed in separate tubs of fresh water; fragile objects such as glass ingots or faience beads were soaked more gradually in increasing concentrations of fresh water. Every three days the water in each basin was changed and the salt concentration levels monitored. When little or no salt was detected, the artifacts were removed from the water and allowed to dry slowly within their plastic bags.

Whether a diver raised a golden goblet or a handful of broken concretions, the recording procedures that followed

were nearly the same. Intact artifacts were given “KW” (Kaş Wreck) numbers, while consecutive “Lot” numbers were assigned to each bag of concretions, sherds or miscellaneous items brought up from a single dive. All objects found in one area at one level thus were grouped together. For each dive a brief description, measurements and rough sketches of all objects raised were entered into the daily field log, along with observations about each artifact’s deposition and notes about other tasks that had been accomplished during the dive.

The field log chronicled everything done on the seabed during the excavation, and when, where and under what circumstances all objects were found. For a detailed record of the finds that received KW numbers, a separate artifact catalogue was kept. This included a description of the object—its type, shape, color and texture of material; exact dimensions; and comments on the state of preservation. Illustrations were included when time permitted, although formal, inked scale drawings were left to the artistic talents of INA staff artist Netia Piercy. Cross references to all page numbers in the field log where an artifact was mentioned were included in the artifact catalogue, as well as notes about whether each item had been drawn by Netia and entered onto the plan.

Most of the amphoras raised at Kaş were of Canaanite style, and these and any jars found containing sand were carefully sieved using the swirling technique developed by Robin Piercy at

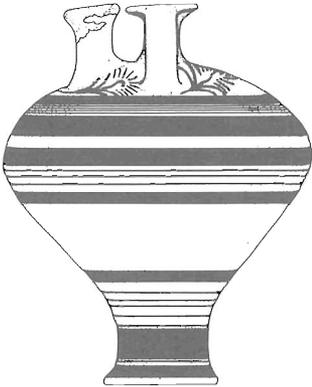
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Kaş Wreck crew member Lisa Shuey carefully places a Mycenaean stirrup vase into a vat of fresh water to begin its desalinization process. A drawing of the vessel by Netia Piercy shows its exquisite decoration (scale, ca. 1:3.4). Above, Piercy draws a piece of Cypriot Base-ring II Ware in the Kaş camp lab. (Photos: Kaş Wreck staff)



Fine Lines Captured With Pen & Patience

By Netia Piercy



illustrates how an object was constructed, and this a camera cannot do.

Archaeological illustration is a slow, laborious task, and it is often undertaken in rather primitive conditions. The heat, wind and dust can dry and clog the pen within minutes, just as in winter, the cold freezes one's hands. At Ulu Burun, the biggest, single distraction is the continual sound of wind and sea. A drawing can take anywhere from a few hours to, perhaps, two days to complete, depending on its shape, size and intricacy. During this time of intense study, the object assumes its own character, and for the artist, often an affinity with the craftsman who made it. It becomes part of one's life.

As with other artwork, some days are better than others; but with this work comes the added responsibility of reproducing as accurate a picture as possible. Unstable and waterlogged artifacts may only be exposed to the air for a few valuable seconds or minutes, for fear of drying and cracking. This allows little time for measurements.

The Mycenaean *kylix* [cup] has played a large part in the dating of the Kaş Wreck. The outline looks simple, yet it has turned out to be a frustrating piece to work on. A drawing error of 2 mm in the curve of the stem and body was enough to give a published parallel for Mycenaean IIIA 1, rather than Mycenaean IIIA 2; this is a small difference on paper, but enormous when trying to give an accurate date for the site. The exact design on the outside of the cup still eludes us; the paint has long since disappeared. In searching light, part of the design impression can be seen, but when trying to draw it in detail, it is not really there.

The variety and texture of the finds are guaranteed to stretch an illustrator to the utmost. They are made of clay, copper, bronze, tin, wood, ivory, bone, gold, stone and glass, and each item will have to be illustrated accordingly. Many of the pieces are asymmetrical, with rounded bases and uneven rims, and are unable to stand vertically without support. All of these problems add to the challenge of producing a faithful drawing.

Ultimately, the outcome of this work will be realized in the final publication of the wreck after many years of excavation, conservation, research, photography and drawing. This probably will be the only written record of an event that happened 3,400 years ago, and, surely, those ancient craftsmen deserve nothing but our best efforts.

Object drawing is a solitary occupation. Concentration is essential, and that is a hard discipline while working on the cliff face at Ulu Burun. The sound of excited voices drifts over the water from the *Virazon*. I see the film crew rush for their cameras while people huddle around the newly surfaced diver. Sitting at my drawing table onshore, with dappled sunlight glinting through the *hasır*, I listen to the heavy thud as another wave turns and sucks its way out of the rock crevice four meters beneath my feet. The wind lifts the corner of the drawing as the radio on my desk crackles to life:

"Netia, can you ask someone to bring the boat out? We've just found a stirrup jar. Complete, intact. It's beautiful!"

I long to jump into the boat and go to see for myself. But with the message passed on, I go back to my last measurement. Is half of 47.5 cms really 23.75 cms? The measurement does not fit. I do not like drawing amphoras, they are too big. Time passes and the sound of the outboard engine reminds me that it is time for lunch, and the boat is on its way in.

In the conservation area a blue plastic bucket sits on the table. Inside is the stirrup jar. It is beautiful. As I carefully lift it out of the water, the sunlight catches the painted design on its neck: a lovely object, amazing craftsmanship.

If I can finish the amphora drawing by the evening, I can start work on the jar tomorrow. The anticipation is pleasant.

Often, people ask about the value of these drawings; surely a photograph is enough. In many ways it is, but a drawing is like an x-ray, as it looks *through* the object. It shows both profile and section while giving exact dimensions. To the archaeologist, it affords all of the technical details of shape and design and thus enables clear parallels to be made. A drawing shows details of wall thickness, rim profile, the join of a handle, and the shape of the base as though the object had been cut in half. It virtually

Wetsuit Hoods To Captain's Caps: Crew Members Wear Many Hats

By Don Frey

How does INA excavate a shipwreck that lies 145 to 170 feet deep?

I recently asked a commercial diving firm what it would charge to carry out a diving operation at such depths. The answer, \$4,000 per ten-hour day, was about four or five times our own modest expenses last year to excavate the Bronze Age Shipwreck at Kaş.

How can INA accomplish this same work so much less expensively? Is it only because we use volunteer divers?

Certainly, that is part of it. However, the answer has more to do with the fact that, in the field, diving is considered only a secondary skill. Obviously, everyone working at such depths must have considerable experience under water and be in good physical condition; but in the long run, special diving skills count little (almost every one of the Kaş crew was on the diving list) compared to the other contributions crew members make to the project operations. Our preparations for last year's excavation easily reveal the extent to which INA staff and volunteers fulfill many roles simultaneously.

For example, INA Turkish Projects Manager Tufan Turanlı spent a long winter working through the business of acquiring permits for the expedition team as well as a separate permit for the KUHT-TV film crew. Shortly thereafter, he put on his customs hat and somehow managed to get all three tons of their film gear and personal effects through customs at Izmir. Deftly changing hats again, he then assumed his captain's cap and sailed INA's 65-ton research vessel, *Virazon*, from Bodrum to Kaş, three days away.

Sailing with him was INA Projects Associate Robin Piercy, who during the winter had put aside his own research on the Mombasa Wreck Excavation he directed to build a three-story

amphora storage gallery deep in an abandoned cistern at the Bodrum Castle. Concurrently, Robin had been preserving the wood from the 11th-century "Glass Wreck," pickling over 1,500 fragments in a hot bath of polyethylene glycol.

It also was Robin who, on arriving at Kaş, orchestrated the construction of our cliffside headquarters. "Impossible," some of the students had said; "you can't really be serious about living there." The few rock shelves that existed were only about eight feet wide. Undaunted, Robin began putting in support poles, beams, flooring, a little cement here and there, until he had a rigid structure which the team then wrapped in mosquito netting and covered with *hasır* (Turkish reed matting). Within a week we had onshore accommodations for fourteen crew members, complementing the twelve beds aboard the *Virazon*; a work area for the plan and artifact drawing; and a sizeable lower level conservation lab for the many artifacts which were soon to be raised.

Another INA staff member, Engineer Murat Tilev, working with only local labor, spent the entire winter sandblasting and repainting the *Virazon's* hull, overhauling the large engines and compressors, and getting our diving equipment in order. During the summer we estimated that he filled about 3,000 twin-80-cc scuba tanks, and we never lost a day of diving because of equipment failure.

From College Station, Dr. George Bass left his teaching and his research on three different shipwreck sites to direct the excavation, while I forgot about INA's accounts and finances and my other presidential duties to resume my role as the expedition photographer. I had barely gotten wet when I put on my tour director's hat and headed to Greece to bring members of the INA Board of Directors in a fleet of six Bodrum *caiques* down the coast for a ten-day visit to Turkey and the Kaş excavation site.

Meanwhile, Assistant Director Cemal Pulak set aside his



Above: Dr. George Bass and Robin Piercy examine a ceramic bowl they have just recovered during their dive on the Kaş Wreck site. Onlookers include Jody Simmons, INA Board Member Jack Kelly, and INA President Don Frey (Photo: Lisa Shuey). Right: Living and working quarters during the 1984 field season were housed together in a simple building constructed against the rock face at Cape Ulu Burun (Photo: Don Frey).



research in College Station on the hull of an Ottoman shipwreck to work his way back during the summer through three millenia and three shipwreck sites. He first spent several precious weeks in Bodrum overseeing his crew of five Turkish women who for the last two years have been sorting through a million pieces of 1,000-year-old Islamic glass from the "Glass Wreck," attempting to reconstruct as many broken vessels as possible. Moving back another 1,000 years, he also worked with materials from the Hellenistic Shipwreck excavated at Serçe Liman. Finally, in Kaş, he spent long hours topside every day recording every artifact on the site plan.

And, of course, Cemal also dived, as did nearly everyone else. Our doctor dived, our Turkish commissioners dived, and so did several of our long-time volunteers. When they weren't on the seabed, they were involved with something else: keeping a machine in operation; recording, cleaning, conserving or documenting artifacts; repairing some necessary tool; but rarely relaxing.

That is how INA is able to run an operation so effectively. Everyone has a specialization, but he or she also can do almost anyone else's job. And diving... it's only secondary.

However, diving to 150 feet is not to be taken lightly. The Kaş Wreck represents the deepest excavation INA has ever undertaken. In fact, we had been working nearly that deep—at 140 feet—at Yassi Ada; but what often is not appreciated by non-divers is the fact that at these depths, each additional ten feet brings on significantly higher levels of nitrogen narcosis. In addition, diving times must be shortened drastically because of the risk of decompression sickness, or the bends. Many commercial diving firms will not work below 150 feet without the benefit of a breathing gas mixture to eliminate narcosis and to minimize

some other potential hazards. And for safety, in most commercial diving operations at this depth the divers are transported to and from the bottom in a diving bell.

Working without these systems, does INA, then, dive unsafely? Our record would point to the contrary. In the last decade we have logged *thousands* of man-hours below 100 feet without a major case of the bends or a diving accident. Our diving is taken very seriously and is rigorously timed and controlled.

While we are working on the seabed, a special "telephone booth" positioned close to the wreck is used in place of a diving bell. Invented more than fifteen years ago for the initial excavations at Yassi Ada, the four-foot plexiglass hemisphere filled with air provides a refuge for divers with any problems, whether it is shortness of air or equipment failure. More significantly, the dome provides an immediate alternative to the instinct to swim toward the surface in a crisis, which at our working depth could be fatal. If a diver ascends and holds his breath—the tendency when one is panicked—air in the lungs or dissolved in the bloodstream will expand four times, rupturing the lungs or blocking blood circulation by the formation of tiny bubbles.

To minimize the necessity for long decompressions, time spent on the seabed at these depths is limited. Maximum dives of twenty-five minutes are allowed in the morning and nineteen minutes in the afternoon, followed by twelve-minute decompression stops, taken mostly on oxygen to more easily purge the body of nitrogen dissolved in the bloodstream.

But where does one get oxygen at Ulu Burun? It comes by truck from Izmir, three hundred miles away, and then by *caïque* from Kaş to the site. In Turkey, the logistics of refilling ten to twelve six-foot bottles every week is staggering, but somehow during our work last summer we never ran out of our oxygen supply. Tufan had put on another of his caps.

RESEARCH NEWS

Airport Display Aimed At Public Awareness Of Nautical Archaeology

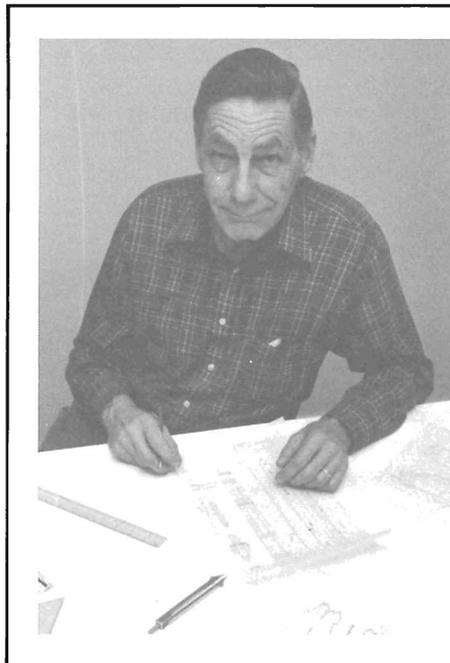
Travellers arriving in College Station by way of Texas A&M's Easterwood Airport will be greeted with a view of INA activities, in a display case now located inside the airport terminal. The public information format was conceived and arranged by Executive Administrator Carol Olsen as a means of spreading awareness about nautical archaeology and the work of the Institute. In addition, Olsen says the inclusion in the display of names of businesses and organizations that have provided financial or in-kind support to INA is a means of recognizing donor assistance. More than 100,000 visitors pass through the airport annually, according to H. E. Raisor, manager of aviation services at Easterwood.

Six local firms, whose individual contributions of at least \$300 made possible the construction and installation of the display case, currently are cited. These include: A&M Travel, Bryan Paint and Glass, Executive Business Machines, First City National Bank, General Telephone Company, and Humana Hospital. These names will remain a part of the exhibit until May 1986, when a new INA display will be assembled.

Myers A Guest Speaker At Conference In Mexico

INA Staff Member Mark Myers was a guest speaker at an international conference in Mexico City, June 3-6, sponsored by the Scientific Committee of Mexico for Underwater Activities (FMAS), and coordinated by Pilar Luna, director of underwater archaeology for the National Institute of History and Anthropology (INAH).

Myers delivered an hour-long address in Spanish entitled, "Archaeological Study of 15th- and 16th-Century Vessels of Exploration and Discovery," the topic of which is a current INA research focus. Institute personnel have been working with Luna for more than a year on the study of an early shipwreck site off the coast of Quintana Roo at Bahia Mujeres. Myers's presentation on the final day of the annual "Week of Underwater Activities" conference complemented previous lectures and meetings that dealt with biological, geological and marine technological research currently ongoing in Mexico.



Mr. Steffy Receives MacArthur Award

INA Ship Reconstructor J. Richard Steffy has been awarded a \$288,000 fellowship from the John and Katherine MacArthur Foundation, a charitable organization that provides philanthropic support for numerous fields and endeavors.

Steffy was one of twenty-five individuals named June 18 to receive the support in annual payments for the next five years. The funding is given without restriction for support of "creative efforts of the nation's theoreticians, artists, scholars and professionals." The money may be used for any purpose, private or professional; no progress reports or published results are required. Recipients are selected for the fellowship based on anonymous nomination.

Staff Members Headed For New Endeavors

The summer in College Station will be marked by the departure of three INA staff members who have been indispensable to Institute operations throughout various periods of the last three years.

INA Secretary/Treasurer Janet Urbina (see profile, *Newsletter* Vol. 10, No. 2) will depart Texas for California in mid-July, destined for her homeland region of San Francisco. After settling herself and her three children, possibly north of the Bay area, she says she intends to seek a job "as full of wonderful people, fascinating activities, and amusing crises" as she has encountered during her three years at INA headquarters in Texas.

Urbina will have no dearth of skills to offer her future employer. In addition to previous teaching and administrative experience in foreign languages, she has negotiated the responsibilities of an administrative assistant, accountant, secretary, computer programmer, buyer, expeditor, and general contact point for INA's high-paced personnel, projects and supporters. Urbina says she is optimistic about the options available to her, but less hopeful of equalling the variation inherent in her present position.

The woman who has addressed many of the Institute's fund-raising and public relations needs for the past year also will leave her position to accept a post with the National Trust for Historic Preserva-

tion in Washington, D.C. Executive Administrator Carol Olsen will become project associate for the USS *Monitor* site off North Carolina, responsible for organizing scientific studies of the shipwreck, raising funds for such research, and disseminating information about the nautical gravesite designated as the nation's first marine sanctuary. Working closely with the National Oceanic and Atmospheric Administration (NOAA), which oversees the protected areas program, her duties also will involve the unique experience of examining the 220-foot-deep remains from a submersible vehicle.

The departure of INA Membership Coordinator Raenell Silcox may go unnoticed by all but those who frequent INA headquarters regularly, but her move to Austin, TX in May to begin law school left no small position to fill. For a year, Silcox has addressed the monitoring and mail-out logistics of INA membership forms, *Newsletters*, offprints and announcements.

Hired as a temporary replacement for the membership position, Barbara Biddle concurrently is learning Urbina's responsibilities, which she will assume in July.

The Institute is sorry to see these able staff members and good friends leave and wishes them the best in their new endeavors.

Conference Proceedings On Sale By Fathom 8

Collections of lectures presented at past meetings of the Conference on Underwater Archaeology may be purchased from Fathom Eight, a California-based group that has organized the publication of four of the last six CUA proceedings. Editions including presentations from the 11th to 13th annual meetings (1980 Nashville, '81 New Orleans, and '82 Philadelphia) are available currently; proceedings of the 1985 conference in Boston are in press and will be available soon. For additional information and prices, contact: Fathom Eight, PO Box 80505, San Marino, Calif. 91108.

Future Meetings Noted

The Eleventh International Congress for Caribbean Archaeology will be held July 28-August 3 on the Rio Piedras campus of the University of Puerto Rico in San Juan. Scheduled seminar topics include prehistoric technologies, historical archaeology, ethnohistorical research, physical anthropology and human remains, site reports, petroglyphs, theoretical and methodological approaches to Caribbean archaeology, human environmental adaptations, and underwater archaeology. INA Research Associate Roger C. Smith will be among the guest lecturers, speaking on the topic of 15th- and 16th-century vessels of exploration and his search for two caravels at St. Ann's Bay, Jamaica.

For additional information, contact Mr. A. G. Pantel, La Fundación Arqueológica,

Antropológica e Histórica de Puerto Rico, Apartado 9187, Santurce, Puerto Rico 00908.

* * *

The First International Brendan Conference sponsored by the Society of St. Brendan the Navigator will be held September 8-14 at Trinity College, Dublin and at County Kerry, Ireland. The aim of the conference is to bring together people interested in Atlantic history and culture, with special reference to St. Brendan. Lectures and discussions will include the topics of early settlements, archaeology, historic and modern exploration, and literature. Several related field activities also are planned.

For additional information, contact: Brendan Conference Organizing Committee, c/o Boole Press Ltd., PO Box 5, 51 Sandycove Rd., Dún Laoghaire, Co. Dublin, Ireland.

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The first announcement has been issued for a conclave entitled "Islands '86: Conference of the Islands of the World," scheduled May 8-10, 1986 at the University of Victoria, British Columbia. Focusing on island life and development, the meetings will feature three speakers each morning, and afternoon activities designed to encourage exchange and dialogue among conference participants.

To receive the second, detailed announcement, contact: Islands '86, University Extension Conference Office, PO Box 1700, Victoria B.C., Canada V8W 2Y2.

* * *

The 11th Congress of the International Union of Prehistoric and Protohistoric Sciences will sponsor The World Archaeological Congress, September 1-7, 1986 at the University of Southampton, England. Five themes have been selected as conference foci: comprehensive studies in the development of complex societies, archaeological objectivity in interpretation, social and economic contexts of technological change, cultural attitudes to animals, and critical periods of change in the Pleistocene. A special event of the conference will be the opening of a major new exhibition at the British Museum in London.

For additional information, contact: Professor P. J. Ucko, Department of Archaeology, University of Southampton, Southampton SO9 5NH, England.

Smithsonian Offers Museology Workshops

The Office of Museum Programs (OMP) of the Smithsonian Institution has issued its 1985-86 Workshop Series schedule which outlines the professional short courses for employees of museums and related institutions available through May of next year. More than thirty, three- and four-day workshops are planned in virtually all areas of museum science. Information also is provided about other OMP services such as internships and community museum assistance.

To obtain a copy of the series brochure, contact: Office of Museum Programs, Arts and Industries Building, Room 2235, Smithsonian Institution, Washington, D.C. 20560.

Field First Aid

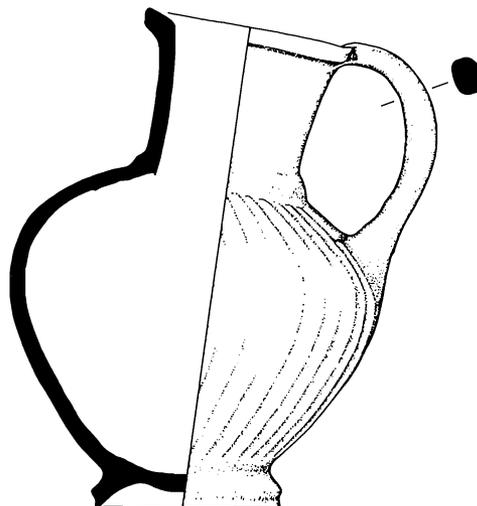
Continued from Page 6

Yassi Ada. Seeds, globs of resin and other materials recovered during the sieving process were placed in labeled jars, and notations were made in the artifact catalogue about their approximate location within the original containers. A more detailed recording of this material was conducted by Cheryl Haldane, who used a microscope she had brought to the site to begin the first of many hours of study of these unique Bronze Age samples.

Since our conservation goal was mainly to prevent further deterioration, mechanical cleaning on most of the materials was kept to a minimum, and encrusted metal artifacts generally were left alone. While this spared the artifacts undue exposure to air until more comprehensive treatment could be undertaken in Bodrum, it did mean that the true shapes and dimensions of most of our bronze objects could only be guessed.

Nevertheless, by the end of the season all objects raised at Kaş had been treated and recorded as completely as possible. With that information in hand, the real archaeological study of the shipwreck was ready to begin.

KW 38, Cypriot Bucchero Ware; Illustration by Netia Piercy.





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