



*At Wolstenholme Towne, archaeologists find fragments of 17th-century colonists' dreams, shattered by hardship and massacre*

# First Look at a Lost Virginia Settlement

By IVOR NOËL HUME

DIRECTOR, DEPARTMENT OF ARCHAEOLOGY, THE COLONIAL WILLIAMSBURG FOUNDATION

Photographs by IRA BLOCK

Paintings by RICHARD SCHLECHT

**I**N MID-APRIL 1623 the ship *Abigail* hoisted sail at Jamestown and slipped away down Virginia's James River, homeward bound for England. If Richard Frethorne paused from his labors to watch her go by, tears must quickly have clouded his vision. Frethorne was an emotional and unhappy man. "I thought no head had beene able to hold so much water as hath and doth dailie flow from mine eyes," he wrote. The life of a Virginia colonist was not for him.

Frethorne was one of hundreds of servants, many of them indentured, who arrived at the fledgling British colony in its early years. Driven by economic and family problems at home and buoyed by the prospect of a new life in the New World, they learned

their first bitter lessons herded aboard ships like the *Abigail*, which had sailed from England in October 1622.

On March 22 of that year, Virginia Indians, led by warrior chief Opechancanough, had risen against the colonists, massacring them in their homes and in the fields. When news of the disaster reached England, the Virginia Company of London assembled relief supplies and shipped them out aboard the *Abigail*.

Along with quantities of old armor and weapons from the Tower of London to rearm the survivors, the ship carried about 150 new settlers and the provisions necessary to sustain them, including barrels of beer—beer which, according to one passenger "stunke so I could not



**VITAL CLUES** in a gripping detective story, the earliest dated piece of British-American pottery yet found (above) and two helmets, brilliantly restored (left), reopen a forgotten chapter in our colonial past.





endure the deck for it." Later, brewer Duppa, the London supplier of the beer, would be accused by the colony's treasurer of transmitting a "contagion" that spread from ship to shore and throughout the already ailing population.

Richard Frethorne, who had survived a voyage in which infection spread so fast that "after a while we saw little but throwing folkes ouer boord," found that he had been assigned to a plantation where only two houses and "a peece of a Church" had escaped the March massacre. Named Martin's Hundred after one of its London shareholders, the plantation stood beside the river about ten miles east of Jamestown, and at its founding in the spring of 1619 was home to more than two hundred settlers.

There were only about twenty left when Frethorne arrived in December 1622, and according to him, when the *Abigail's* food reached them, they gorged themselves to a point where "itt killed them that were ould Virginians as fast, as the scurvie & bloody fluxe did kill us new Virginians."

Before long Frethorne was reduced to

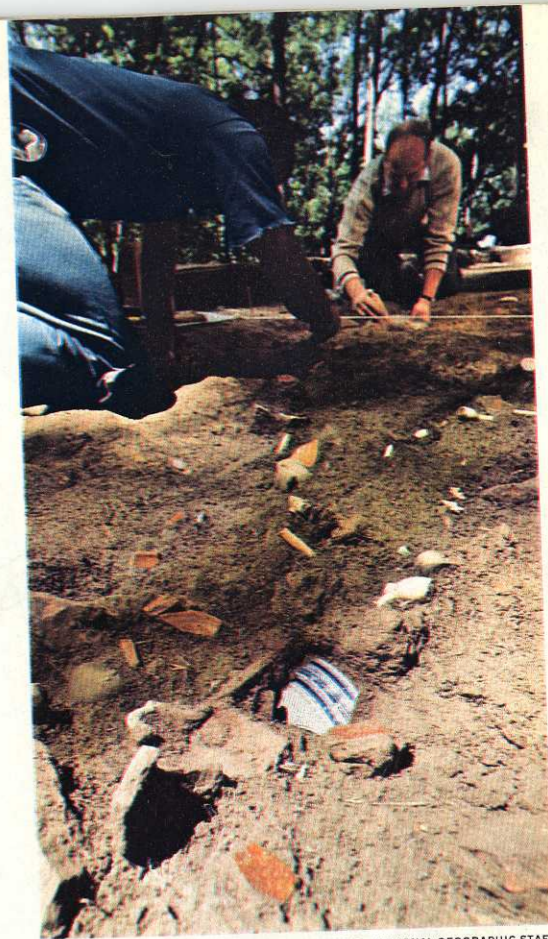
rags, not a shirt on his back. Even his cloak was stolen by one of his "owne fellowes" and traded for food. To his parents he wrote, "I neuer felt the want of father and mother till now, but now deare frends full well I knowe and rue it although it were too late before I knew it."

It was indeed too late. Before the year was out, Richard Frethorne was dead, victim of starvation or perhaps Mr. Duppa's beer. Frethorne had been sent to Virginia as a servant to William Harwood, "governor" of Martin's Hundred and leader of a group of settlers once considerably larger than the number who had landed at Jamestown in 1607, only 12 years earlier. \*

Jamestown, however, survived, and Martin's Hundred did not. Harwood never joined Capt. John Smith or John Rolfe on the pages of Virginia history. Sir John Wolstenholme, a prominent Martin's Hundred shareholder who gave his name to the

\*From documentary records historians know the general location of Jamestown's original fortified settlement, founded in 1607. Archaeologists believe that the site has been washed away by the James River.

"We were totally unprepared for what we found," recalls the author (right, at right). He had been directing the exploration of Carter's Grove, an 18th-century plantation near Williamsburg. Then came the surprise: thousands of artifacts from the previous century unearthed at three sites. His team found postholes marking the site of the earliest town plan in British America yet revealed by archaeology—Wolstenholme Towne, the seat of a settlement known as Martin's Hundred. Its first colonists, arriving aboard the *Gift of God*, docked at Jamestown in April 1619 and were ferried (left) to their new home, about ten miles down the James River.



DAVID L. ARNOLD, NATIONAL GEOGRAPHIC STAFF

settlement's central community, had to rely on desolate geographical features of Greenland and the Hudson Bay region to keep his name on the map. Even Martin's Hundred was destined for oblivion, its name first corrupted to Merchant's Hundred, and then succeeded by a much more enduring Virginia plantation name: Carter's Grove.

For close on 350 years the remains of Wolstenholme Towne would lie buried and forgotten—until archaeologists looking for something quite different came upon them. But even then, a few dirty marks in the soil and a handful of potsherds did not hint that we had stumbled upon one of the most dramatic incidents in American colonial history—or that there we would uncover postholes offering evidence of the earliest town plan yet excavated in British America, together with some truly astonishing artifacts.

So far it has taken us more than three years of painstaking digging (with the support of the National Geographic Society) to reconstruct what happened there and to put Martin's Hundred securely back on the map (pages 744-5).

**I**N 1969 the 18th-century Carter's Grove mansion and more than 500 surrounding acres were deeded to the Colonial Williamsburg Foundation to create an exhibit interpreting colonial plantation life. As Colonial Williamsburg's director of archaeology, I was given the task of organizing the 1970 exploration of those acres in search of buried clues to help re-create the mansion's 18th-century environment—and as survey archaeologist Dr. William M. Kelso often reminded me, 500 acres was a lot of territory. About half had been plowed for centuries; the rest was wooded gullies and marshland, and always had been.

Through the woods, Bill's survey team dug hundreds of test holes looking for even the smallest traces of past occupation: a nail, a scrap of brick, a potsherd—anything that would say "somebody did something here!"

The plowed fields posed another problem. There the land surface had been turned over time and time again, destroying the accumulated layers of soil and refuse that man leaves behind on his homesites, and that might otherwise provide (Continued on page 747)





Archaeologists  
excavated earth,  
structures and struc-  
tures that almost  
all gotten Wol-  
Designated

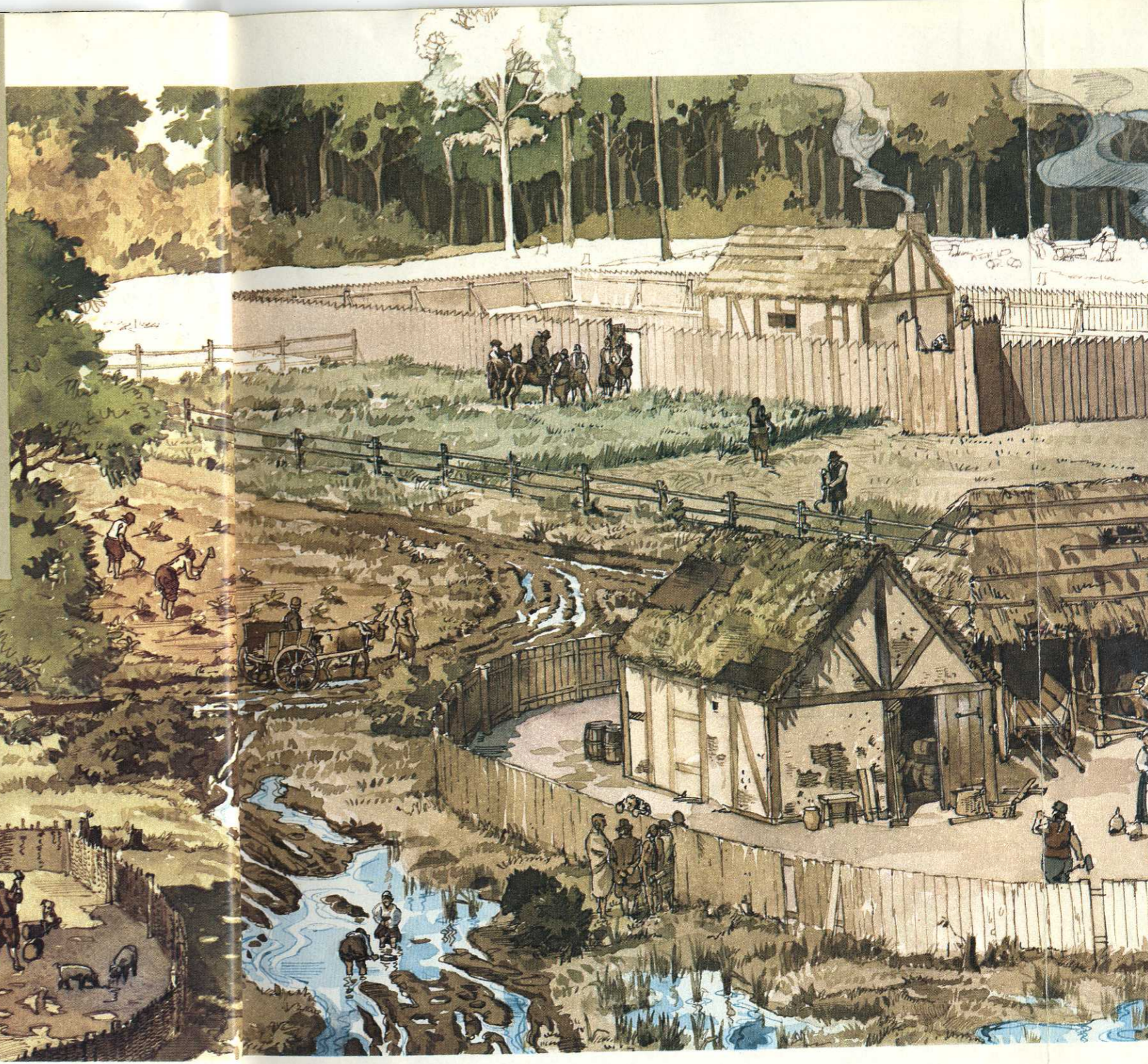
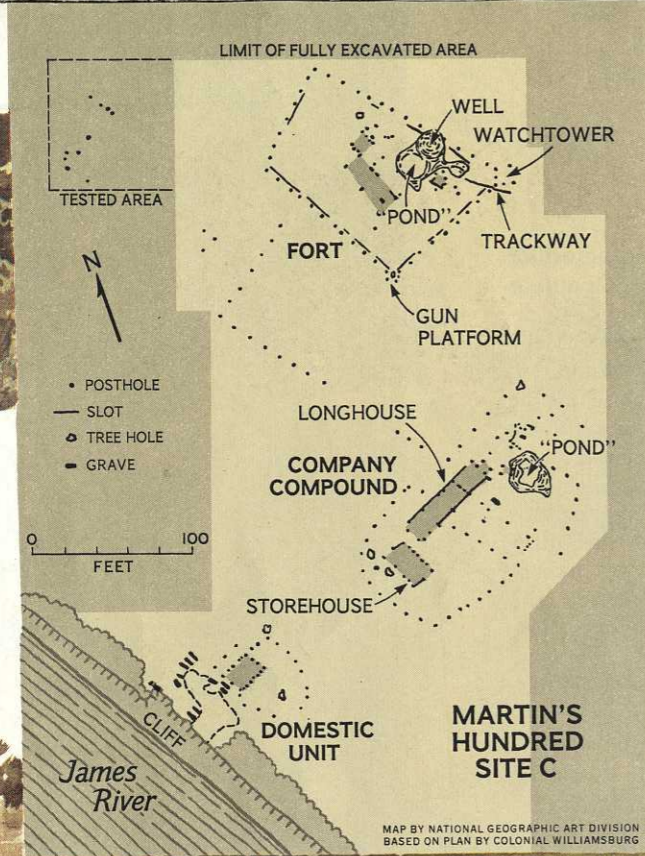
Site C, the most extensive of the 17th-century sites excavated at Martin's Hundred, about four acres of the town have thus far been discovered, although the James River has probably eroded an equal area.

The settlement's leader may have lived in the fort, background, that served the community as a refuge from attack by Indians. Besides the colonists' crops of tobacco, used locally for barter, they raised food staples that included corn and

livestock, such as the goats and hogs inside a wattle fence around the cottage at far left. In a company compound, above, a longhouse, at right, is adjoined by a byre or stable, flanked on the left by a storehouse.

The elements of the Martin's Hundred settlement that have been found thus far come tantalizingly close to a design that was employed during the same period by fellow English colonists—an ocean away in Ireland.





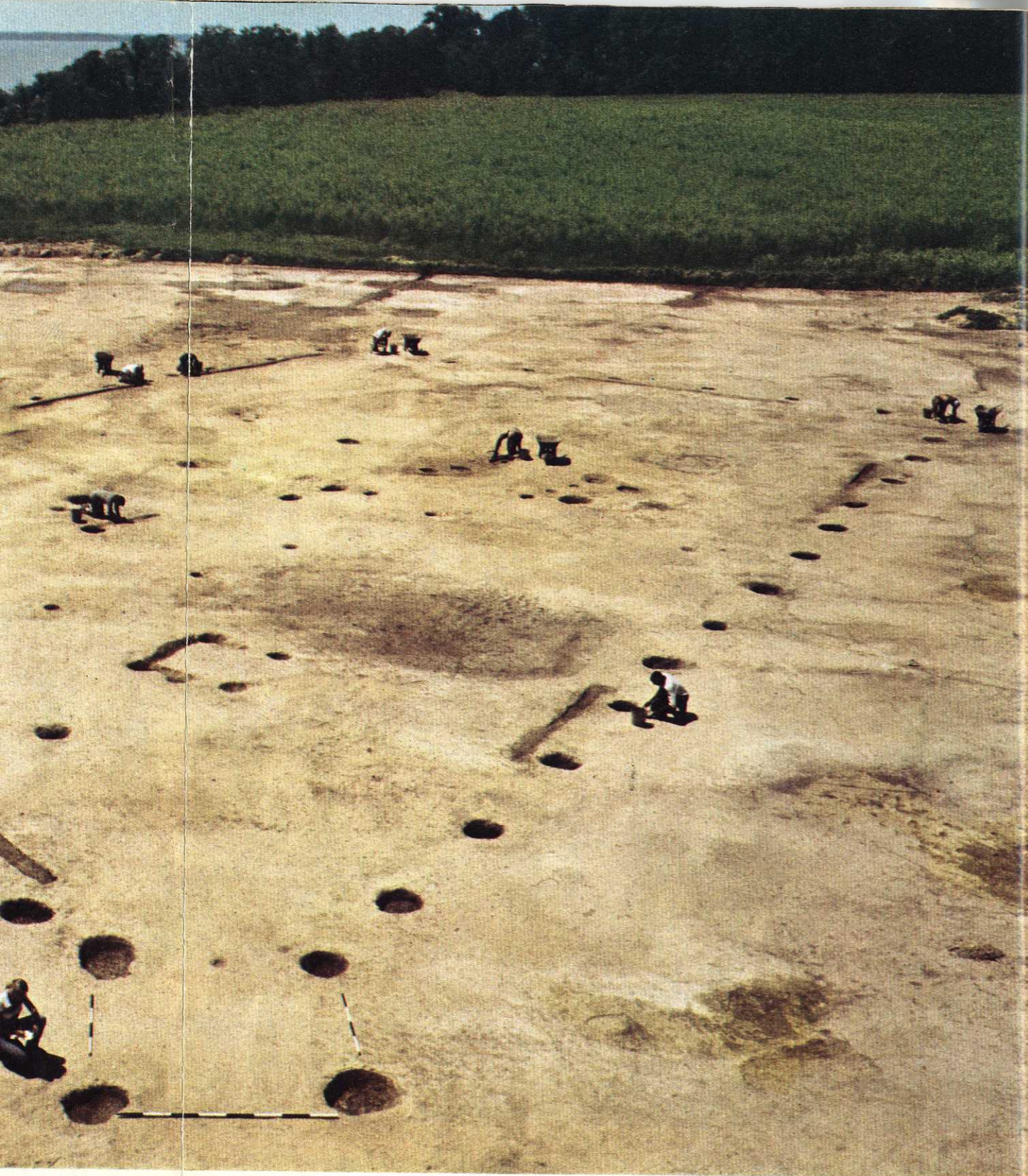
They had come to stay, a company of men and women determined to hack Martin's Hundred out of the wilderness and make it a going concern. First order of business: Build a town. This is how it may have looked between 1619 and 1622.

Revealed when the archaeologists stripped away a layer of plowed earth, patterns of holes where fences and structures once stood diagram what almost certainly was part of long-forgotten Wolstenholme Towne (inset). Designated

Site C, the most extensive of the 17th-century sites excavated at Martin's Hundred, about four acres of the town have thus far been discovered, although the James River has probably eroded an equal area.

The settlement's leader may have lived in the fort, background, that served the community as a refuge from attack by Indians. Besides the colonists' crops of tobacco, used locally for barter, they raised food staples that included corn and





Archaeologists had  
ports with posts set  
rows. Instead, the  
team deduced that

a palisade fence with rails and planks connecting the posts—an irregular trapezoid enclosing about 10,000 square feet—had been Wolstenholme's refuge. In center

foreground, four holes delineate a square watchtower. Within the fort, structures once existed, sketched by holes that yielded ashes—clues to a fiery disaster.

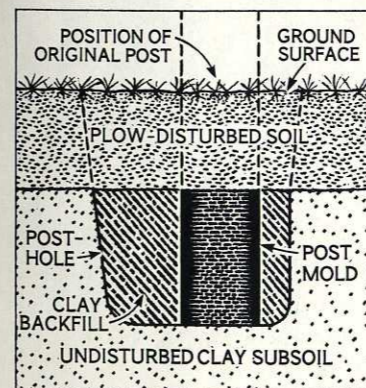
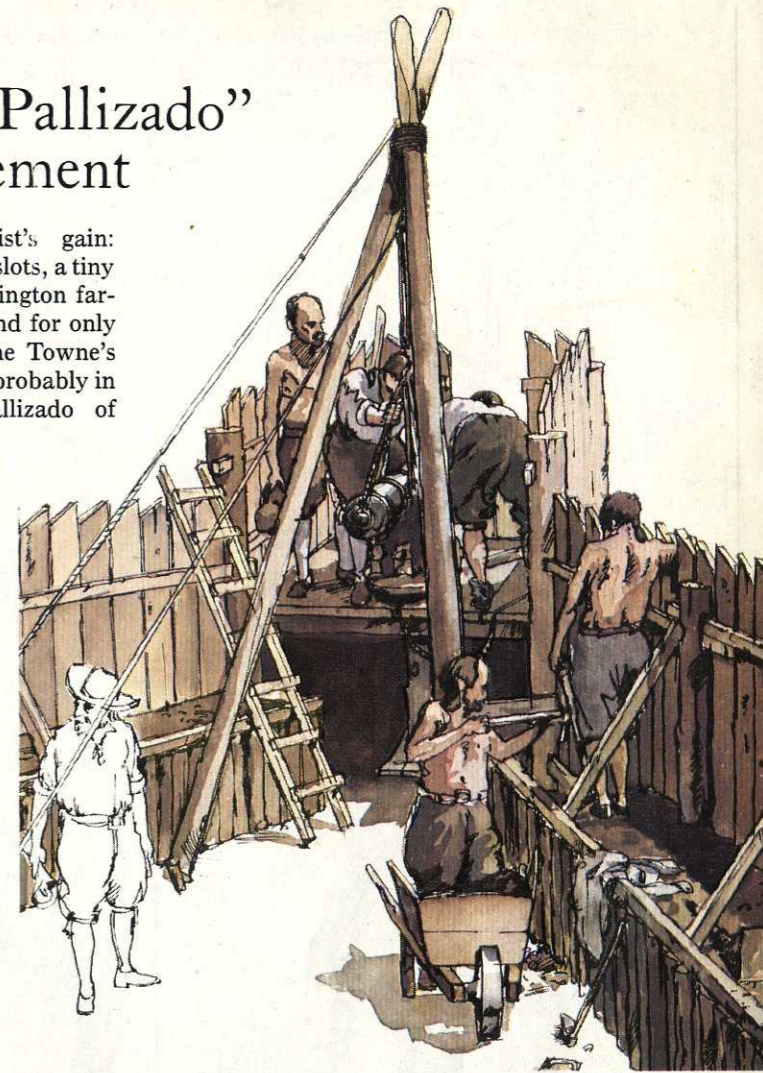
IVOR NOËL HUME

## Remnants of a "Pallizado" Reveal the Settlement

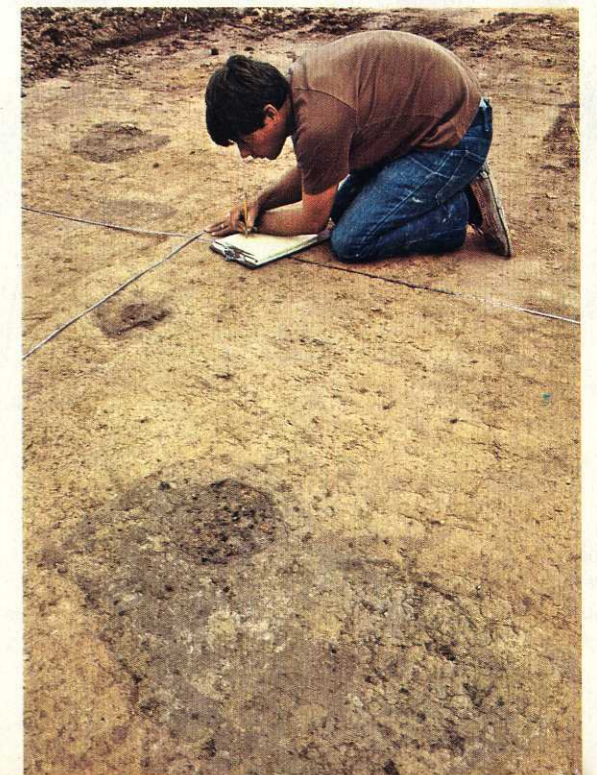
**S**ETTLER'S LOSS, archaeologist's gain: Found in one of the fort's ground slots, a tiny tinned copper coin known as a Harington farthing (below) was minted in England for only three months in 1613. Wolstenholme Towne's fort (right) was built six years later, probably in the manner of Jamestown's "Pallizado of Planckes and strong Posts. . . ." At center, colonists position a cannon to face the river, reflecting their fear of an invasion by the Spanish, a powerful threat from the south. At right, workers build a three-foot-high platform of earth and timber, designed to enable defenders to rest their muskets in notches between palisade planks, about 7½ feet tall.



The faint evidence left by these structures challenges archaeologists like William R. Henry, Jr. (below right), here plotting ash-filled postholes. Posts leave two marks (bottom). In the hole's outer perimeter, where earth was filled in around the post, the most recent artifact found gives a date after which the post was erected. In the small inner area, called the post mold, the most recent artifact found gives a date after which the post had rotted, burned, or was pulled out.



DIAMETER OF COIN 0.4 INCHES; DAVID BRILL (RIGHT)



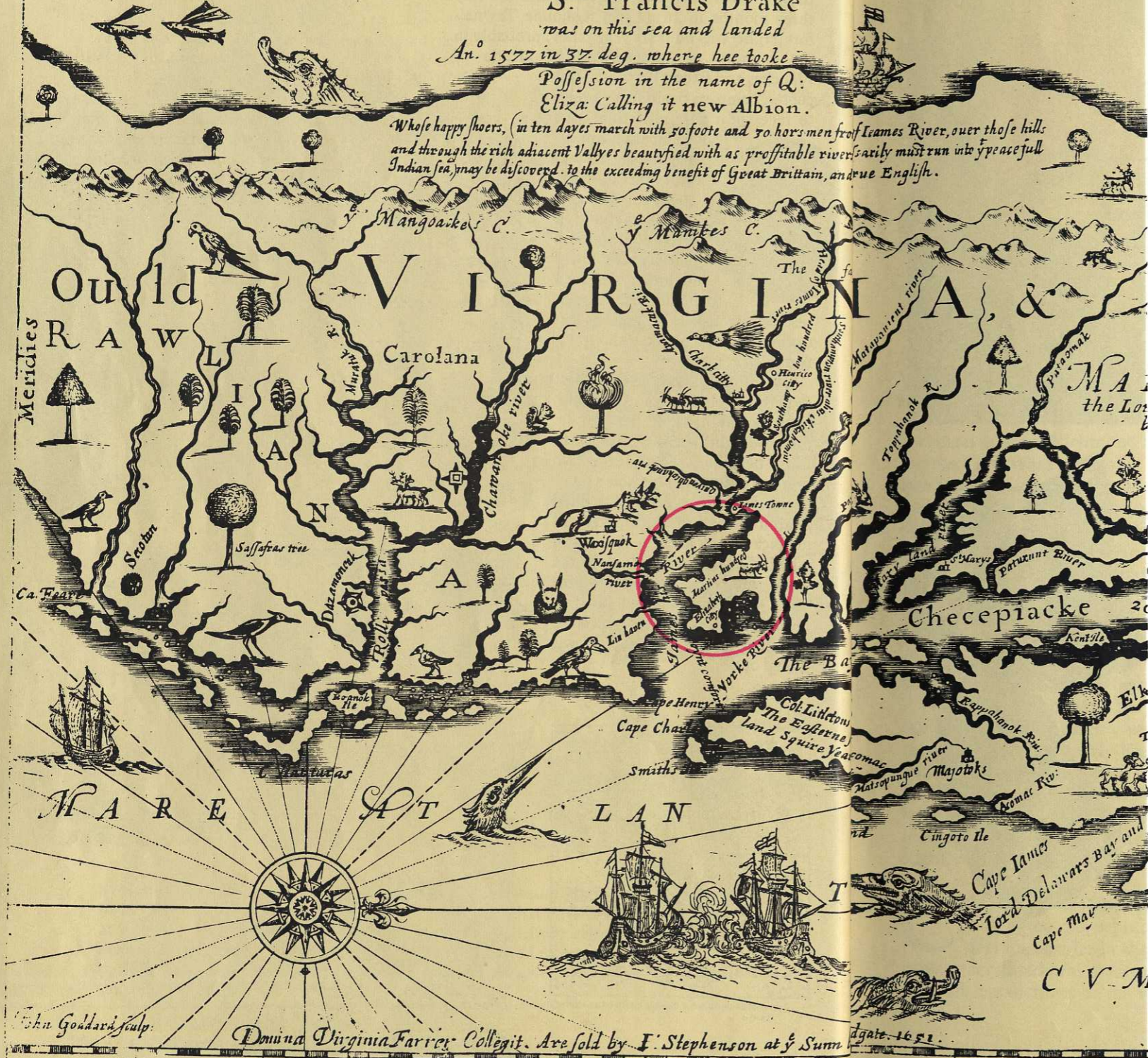


# The Sea of China and the Indies.



Sir Francis Drake  
was on this sea and landed  
An<sup>o</sup> 1577 in 37. deg. where hee tooke  
Possession in the name of Q:  
Eliza: Calling it new Albion.

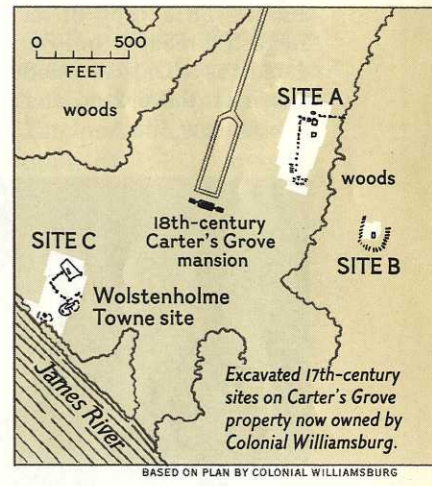
Whose happy shoers, (in ten dayes march with 50 foote and 30 hors-men frof Ieames River, over those hills  
and through the rich adjacent Vallies beautified with as profitfull rivers, acily must run into ypeacefull  
Indian sea, may be discovered. to the exceeding benefit of Great Brittain, and true English.



**PATHWAY TO PROSPERITY**, the earliest known map showing Martin's Hundred directed settlers up the James River to China. The 1651 map (with west at the top) led them to believe that just beyond Virginia's "Vallyes beautified" awaited the riches of the Orient, only "ten dayes march . . . from the head of Ieames [James] River." The colonists who had suffered in this alleged Virginia paradise did not know that the Orient was actually about 11,000 miles away, but they would have wondered why no copperheads, voracious insects, or hostile natives were depicted along with the birds and bunny rabbits.

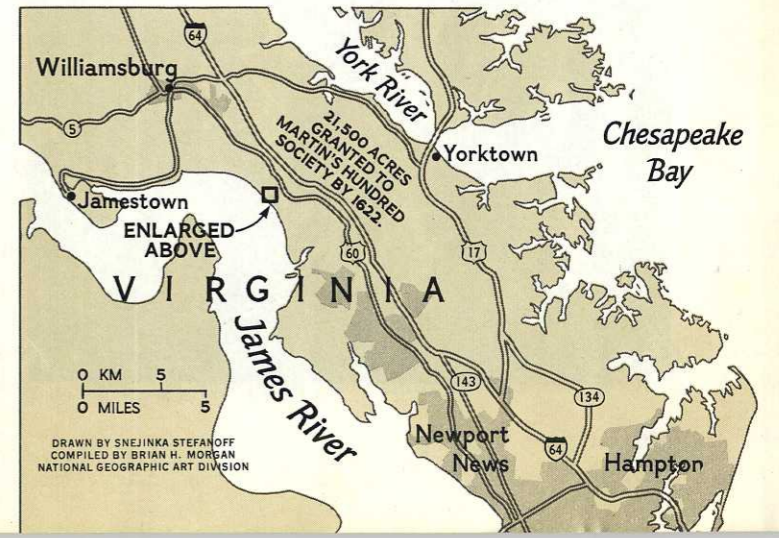
The reality was that after the Virginia Company of London staked its fortune at Jamestown in 1607, most of its planters were lucky merely to survive, let alone show a profit. So in 1616, when dividends from the company's original "Incorporations" came due, all the enterprise had to offer was more land. That it did—to private adventurers and joint-stock companies such as the Martin's Hundred Society, named for shareholder Richard Martin. Another was Sir John Wolstenholme, for whom the society's town was named. Through investments by these and other like-minded entrepreneurs, a tide of settlements called "particular plantations" flowed up and down the James and peopled its banks.

Martin's Hundred—a "hundred" once meant a tract big enough to sustain a hundred families—was allotted at least 21,500 acres (bottom). The first settlement, with an initial population of about 200 people, was founded in 1619 on Site C (right). Later, several structures were built around a large house at nearby Site A, where residents discarded bits of bottles and pottery—datable trash indicating occupation between about 1625 and 1645. In the same period a house stood at Site B. Archaeological evidence has yet to be found pointing to occupation in Martin's Hundred beyond the 1650's.



745

MAP OF VIRGINIA DRAWN BY JOHN FARRER, 1651. WILLIAM L. CLEMENTS LIBRARY, UNIVERSITY OF MICHIGAN, ANN ARBOR



John Goddard sculp. Donna Virginia Farrer Collegit. Are sold by F. Stephenson at y Sumergate. 1651.



As the mystery unfolded, archaeological detectives trailed evidence of a man of means, perhaps William Harwood, "governor" of Martin's Hundred. A latecomer to the Virginia colony, he joined its governing council, which in 1621 forbade "any but ye Council & heads of hundreds to wear gold in their cloaths." Found on Site A, an inch-long scrap of woven gold called a point, similar to those shown on a garter in this 1621 painting of Sir Henry Paiton by Flemish artist Daniel Mytens (right), may once have adorned Harwood himself.

Likewise, a cast-iron fireback decorated with the royal arms of England bespeaks a wealthy owner. Discovered inside the fort, metal fragments (below right) comprise part of the motto of the Order of the Garter, HONI SOIT QUI MAL Y PENSE—"evil to him who evil thinks." Beneath the L on the upper piece, a unicorn's hoof proved to be in an identical position with another on a copy of an English fireback (below) dated 1621. Did Harwood live first in the fort and later in a house at Site A?



COURTESY SIR HERWARD WAKE, BT (TOP RIGHT)

(Continued from page 737) archaeologists with the earth sequences that help them to figure out who did what—and when.

All we could hope to find amid the plow-churned acres of Carter's Grove would be those traces of human occupation that might lie deeper than the blade could reach: dark stains in the clay subsoil marking holes once dug to seat building foundations and fences, to sink wells, or to receive household garbage. Such marks would show up only after the nine inches or so of plow zone had been stripped away. But to do that over about 250 acres would have seriously damaged the farmland and cost a fortune. The only sane (but archaeologically frightening) course was to cut—and later refill—trenches across the fields with a mechanical grader, the slices ten feet apart and six wide, broad enough to expose any patterns in the subsoil.

The technique worked well enough, but we encountered a problem: Very few of the subsoil disturbances dated from the 18th century. Instead, scattered through the fields and woods all around the Carter's Grove mansion was evidence of European life there a hundred and more years earlier.

The court records of James City County had been taken to Richmond for safety during the Civil War, only to be burned in the fighting. Because they related to Jamestown and the settlements that grew up in its immediate vicinity, the loss of those records cost the nation one of its primary historical resources. Consequently we have few records to document the legacies and land transactions that converted the 17th century's Martin's Hundred into the 18th century's Carter's Grove or, indeed, to show that there was any connection between them.

For my part, although I had studied 17th-century artifacts for many years, I remembered so little of my early English history I had forgotten that a "hundred" was a term for a county subdivision usually defined as large enough to sustain a hundred households. To most of us it was simply a figure slightly more than 99. We had a lot to learn.

**C**OLONIAL WILLIAMSBURG has long enjoyed a reputation as a pioneer and leader in the field of 18th-century architectural restoration, and in 1976 its instructions to me reflected those

interests. A two-acre strip of flatland had been left untested in our 1970 survey, untested because we had backed off when we began to uncover graves—seven of them at first—all of unknown date. Now we needed to determine the age and extent of the cemetery so that Williamsburg architects could know whether they might legitimately use portions of the acreage for exhibits of 18th-century plantation life.

If success or failure is measured by how well we fulfill our employers' desires, we failed miserably. By any other standards our 1976 excavations succeeded beyond our most expansive hopes. The 23 graves we ultimately found belonged to a settlement—we called it Site A—dating from the second quarter of the 17th century. They flanked and straddled a fenced lane leading to the site of a major dwelling and at least seven other structures (pages 756-7).

Five of the graves lay in a straight line, suggesting that the bodies were all interred at the same time—perhaps victims of contagious disease. At once Richard Frethorne and the ill-fated voyage of the *Abigail* came to mind. But just as outbreaks of plague were common in England (41,313 died in the London contagion of 1625), so now-identifiable maladies carried off hundreds of Virginia colonists. According to a contemporary estimate, between 1619 and 1621 some 3,560 people were sent out from England to join the colonists. About 3,000 died within that three-year period. In short, taking one's chances as a "new Virginian" was a gamble that rarely paid off.

We had found some of the losers. Dr. J. Lawrence Angel, the Smithsonian Institution's curator of physical anthropology, examined the bones in the graves.

"The most startling thing about the skeletons is their youth," he told us. Of 15 graves grouped together, Larry estimated that not one was above the age of 32. Five children had died between the ages of 2 and 8, five women between 22 and 30, and five men between 23 and 32, all of them white.

Very little had gone right for the Virginia colony after its founding at Jamestown in 1607. Although a fragile détente had been reached with the Indians, inconsistent management and lazy labor, coupled with an alien climate and rampant disease, ensured



that when in 1616 it came time to declare the Virginia Company's dividends, the shareholders came away enriched only with more promises. It was then that the company began to offer land patents to individuals and other joint-stock companies willing to invest in America.

One of these was the Martin's Hundred Society, which, like London trade guilds planting settlements in Ireland's Ulster, undertook to build its own company community, to be called Wolstenholme Towne, and to send over enough people to work the land and return a profit.

They reached Virginia in April 1619 aboard the *Gift of God*, and in July the new plantation of Martin's Hundred sent two representatives ten miles upriver to Jamestown to the first legislative assembly to convene in British America. Not until April of the following year did the "governor" of Martin's Hundred, William Harwood, set sail from England. He was a newcomer of sufficient importance to be appointed to the colony's governing council, and he was still a member when in 1621 it passed a resolution to "Supress drunkenness gameing & excess in cloaths [and] not to permit any but ye Council & heads of hundreds to wear gold in their cloaths."

**T**O MANY, the record of who should and should not wear gold in his clothes can be dismissed as historical trivia, but for us it had a special importance. In one of the Site A rubbish pits, supervising archaeologist Eric Klingelhofer found an inch-long scrap of woven gold, rolled and stiffened at one end. It was an ornament, probably from a man's garter, known in the 17th century as a point, a sartorial embellishment generally worn by men of importance (page 746). Perhaps we had found a trace of the clothing of William Harwood, council member and head of the hundred, the only man who, by that 1621 Virginia law, could wear gold in his clothes.

Unexciting in itself, but perhaps thunderous in its significance, was the discovery of a 3<sup>3</sup>/<sub>4</sub>-inch cannonball: The 1625 census lists only one man in Martin's Hundred with a cannon—William Harwood.

Throughout the summer of 1976 the incoming artifacts from Site A continued to

point to a household of substance, a place that had been home to at least 108 square glass bottles—an enormous number when one considers that no Virginia household inventory surviving from the first half of the 17th century lists more than five. There were double-handled earthenware flasks from Spain, marbled slipware plates from Italy, stoneware bottles and jugs from the Rhineland, and tin-glazed ware from England and Holland.

One rare plate differed from any I had seen from Holland or England; its blue decoration looked more like designs on majolica attributed to Portugal. But then I remembered an identically decorated sherd I had picked up several years earlier on a mountain path on St. Eustatius, a West Indian island settled by the Dutch in the 1630's. I had little doubt, therefore, that the plate was Dutch and not Portuguese.

If the quality and variety of the domestic artifacts pointed to William Harwood (or to someone of his social and administrative stature), the largest artifact of all—the house—remained glumly unresponsive. It had left us no brick or stone foundations, no walled cellar, not even a brick chimney base—only a pattern of postholes to show that the building had measured 40 feet by 18 feet, and that in the course of its life a porch or narrow room had been added at one side.

Unexciting as they may appear, postholes can yield vital clues to the birth and death of an archaeological site (pages 741-3). Those faint stains in the clay subsoil at Martin's Hundred would ultimately tell us nine-tenths of the dramatic story that we eventually unraveled.

Similarly, the tedious task of numbering and crossmending often tiny fragments of pottery was contributing something more than patched-up pots: It was reestablishing associations in both space and time. A sherd unearthed from the fill of a cellar, for example, would be found in the laboratory to join sherds from the same vessel dug from a storage pit and a tree hole elsewhere on the site. Such painstaking linkage declared clearly to us that all three holes were being filled with trash at the same time, and that the cellar, by then, had already lost its house. This crossmending process lies at the heart of archaeological interpretation—which explains

why interpretive conclusions may not be reached until several years after the digging has ended.

**O**NE POTTERY VESSEL required no lengthy mending to tell its story. What it needed was the digging of an entirely new site.

"I think I've found a pottery nose cone!" exclaimed student excavator Richard M. Veditz. It looked more like a Turkish helmet to me—which was not too far off the mark. In the 17th century these conical vessels were often called helms. What Rick had found was an alembic, the top element from a three-part still (page 754).

Glazed on the inside and with a folded gallery around the interior rim leading to a tubular spout, the alembic captured the liquor or medicinal distillate as it cooled, turned liquid, and ran down the glazed wall out through the spout and into a waiting bottle. I knew of several fragmentary examples recovered from European sites, and I had seen them in Flemish and Dutch paintings, but none were as handsome as this. It was a superlative piece of potting, from its finger-decorated spout to its unique conical finial. The potter must have thought so too, for when he finished he dabbed a touch of glaze to the top as a crowning flourish.

As a relic of some master potter from the Low Countries, this discovery would have been cause enough for scholarly ecstasy, but I knew it to be something more. Made from the local Tidewater Virginia clay and found with waste from the kiln where it was baked, the alembic opened a new window on the genesis of American ceramic art. If only we could locate the kiln itself!

Before the 1976 season was over, we were to find more surprising evidence of the quality of early American potting. We learned that at least one potter made decorative ware, dishes embellished either with yellow-slip ornament or with similar designs incised into the clay in the technique called sgraffito. But we found no kiln, and there was nowhere left on this domestic site to look.

Believing that the kiln might be cut into the side of a hill, and knowing that another site of much the same period lay in shouting distance across a ravine to the southeast, we planned to move there in the spring of 1977.

Meanwhile, the crew would spend as much wintertime as weather would permit digging test holes through the woods in search of Wolstenholme Towne. We were now convinced that Site A could not be it. Our dating evidence indicated that the site had not been occupied before about 1625 and that life there continued to about 1645. We had found no signs of any major destruction by fire as we would expect of buildings attacked by Indians in 1622. The new site across the ravine seemed too small to seat a town, and, located above a shallow creek, it offered poor access to the James River.

Unlike Site A, this one (rather unimaginatively identified as Site B) had not been mutilated by plowing. Soil strata laid down in the 1630's had been disturbed only by roots and rodents. Once we moved the thin skin of dead leaves and recently formed humus, artifacts were everywhere. Alas, they belonged to a single, post-built house, and search as we did, there was no sign of a potter's kiln. Again, unlike Site A, this one yielded only a single rubbish pit, but it proved rich in content.

The pit's top layer contained two ax heads—one European, the other Indian—in association with pieces of armor, and at once we thought of the 1622 massacre. Could this be debris buried when the survivors came back to rebuild? Most of the artifacts were hard to date with sufficient accuracy: links from chain mail, an elbow section from a suit of armor, several pairs of scissors, a crystal bead, the lid and bottom of a small brass box, and fragments of local pottery, including pieces matching Site A slipware. On the other hand, finding most of a splendid German stoneware jug made between about 1610 and 1630 did nothing to weaken the possibility that the pit dated to the massacre period (page 751).

Archaeological directors are usually seen watching other people work, and that certainly is a necessary function of a supervisor. But for me, when it comes to the interpretation of critical details, there's no substitute for doing the work yourself. The Site B pit was just such a case, and together with crew foreman Nathaniel Smith, I stayed with it all the way. If we could be sure this was indeed a pit filled in 1622, it would be a Rosetta stone for the dating of colonial artifacts



in use in the first quarter of the 17th century.

Unhappily it was not. At the very bottom of the pit was another fragment of the local slipware—the date 1631 worked into its decoration (page 735). It gave us the earliest dated example of British-American pottery yet found, but it destroyed our massacre theory. The pit could not have been filled until at least nine years later.

Very few artifacts (other than coins) have dates actually marked on them, and the chance of finding a piece of dated pottery from the early 17th century was laughably small, yet many artifacts do offer clues to their place and dates of manufacture—if we are smart enough to recognize them. The little brass box found much higher in the pit's filling was to become a classic example. Stamped on the lid with its maker's mark in the shape of a hand, it reminded me of later Dutch and German tobacco boxes, but I had no proof, nor any clue to its date.

Six months later I learned that an identical box bearing the same marking had been

recovered from the wreck of the *Batavia*, a Dutch merchant vessel lost off the Australian coast in 1629, a date extraordinarily close to that of our 1631 dish (page 753).

Failing to immediately date the brass box was not my only error at Site B. When planning the excavation, I had taken care to clear the site of poison ivy and underbrush that might hide venomous snakes, ticks, and hostile insects, but I had failed to consider the vicious deerflies that infest the Carter's Grove woods in summer. Attacking in late June, they made continued work on the site impossible.

The only recourse was to retreat to another of the sites found in our 1970 survey, one in open ground closer to the river. We designated it Site C. Thus luck and an army of deerflies led us to one of the most productive American archaeological discoveries of recent years.

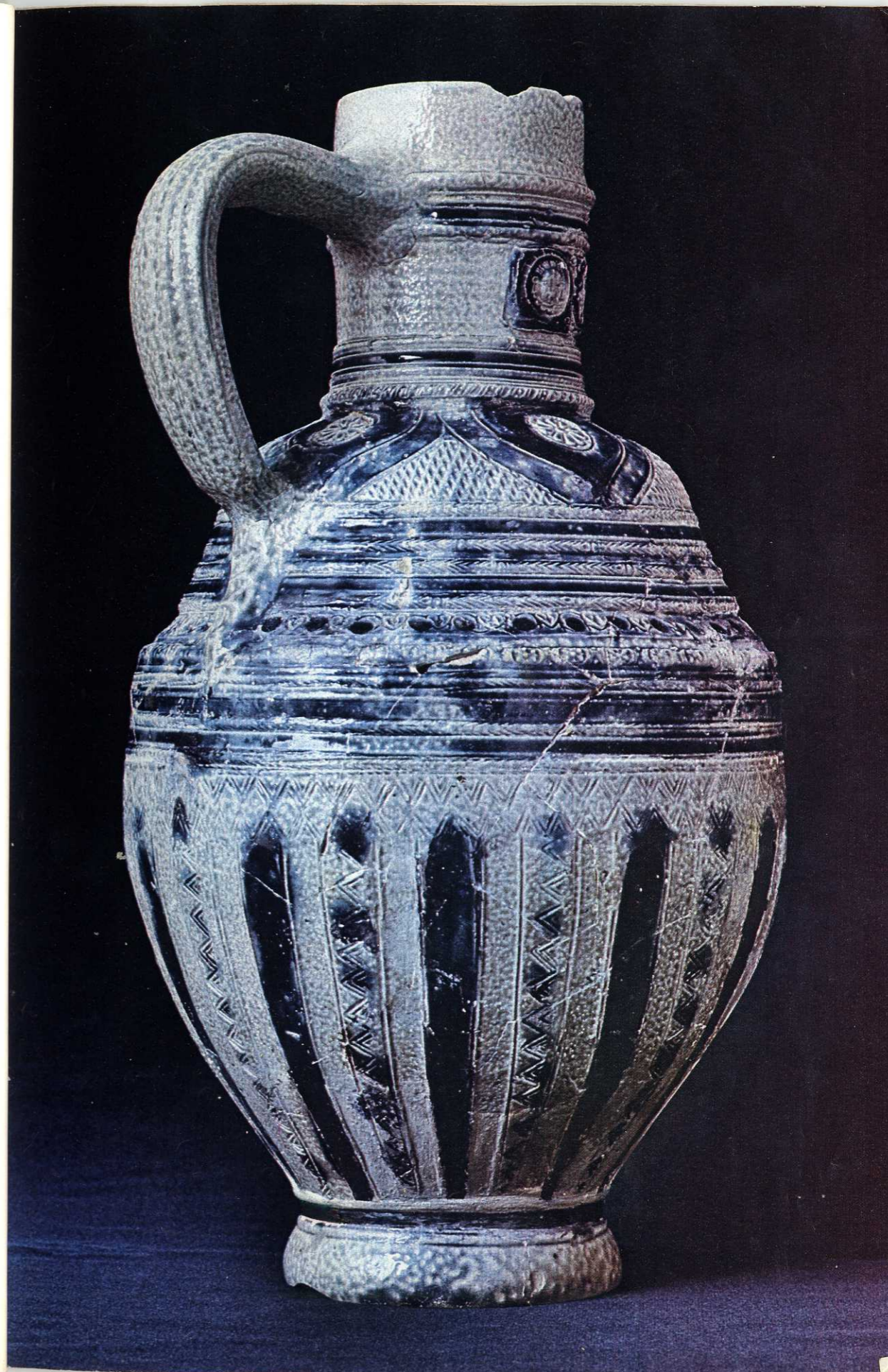
**W**ITH the 1977 summer season half over when we began, I decided to limit our work to an area a hundred feet square where the 1970 testing had shown a large dirt-filled depression in the yellow-clay subsoil. Eric Klingelhofer found that feature again without any trouble, but he was disappointed to discover that about half of the hundred-foot area was totally barren; everything was crammed into one corner within two rows of large postholes set nine feet apart.

As each new hole was plotted, Eric and I became more puzzled. The lines of holes were coming together at a 72-degree angle.

"It looks for all the world like two sides of a triangular fort!" I don't remember which of us said it, but I do know that it was I who quickly rejected the fort theory. Forts, I insisted, had to have their posts set side by

**Well-traveled artifact**, this handsome German stoneware jug, probably made between 1610 and 1630 (right), was pieced together from Site B. Produced in the Rhineland, exported through the Netherlands to London, it crossed the Atlantic to add a graceful touch to a colonist's home at Martin's Hundred. A similar jug appears in "The Listening Housewife" (left), painted in 1656 by Dutch artist Nicolas Maes.

DETAIL REPRODUCED BY PERMISSION OF THE TRUSTEES OF THE WALLACE COLLECTION, LONDON





side, so close that an Indian couldn't zap an arrow between them. After all, that was the way the palisade has been built at reconstructed Jamestown, and that's the way they are in Western movies from *Fort Apache* to *Laramie!* But I was wrong—as Audrey, my research associate (who also happens to be my wife), gently pointed out.

Rereading William Strachey's 1625 account of the settlement at Jamestown, Audrey found that he had described the fort as being built "with a Pallizado of Planckes and strong Posts, foure foote deepe in the ground, of yong Oakes, Walnuts, &c." There, then, was our answer: a palisade built with widely spaced posts and with planks between (pages 741-2).

While we were still debating, Eric's team discovered four deeper holes that created a square box projecting eight feet beyond the junction of the two palisade walls. Strachey had a Jamestown explanation for this too. "At every Angle or corner," he said, "where the lines meete, a Bulwarke or Watchtower is raised."

Beside our watchtower, Eric pointed to an irregular soil stain extending both inside and outside the palisade. "There had to be a gate there," he said.

"But that would be hard to defend," I demurred. "Maybe the palisade was later used as a cattle compound, and an extra entrance was added at that time." But again Audrey pointed to the words of William Strachey. Beside each of the watchtowers, he had written, "there is a Gate likewise to go forth," and at every gate a cannon.

By now we were sure we had stumbled into a palisaded fort. But who had built it, and when?

Surviving documents show that there were several forts or palisaded compounds defending the outlying plantations along the James. Virginia colony treasurer George Sandys was listed as having forts, two of them paled in, on each of his three properties. Every time the wording suggested he had both a dwelling and store buildings inside, indicating that the defenses were more than mere enclosures to retreat into in case of attack.

Although the 1977 excavations exposed only a corner of our fort, the number of postholes inside it hinted at considerable interior

construction of one sort or another. The artifacts were more explicit. Fragments of glass bottles, cooking pots, and dishes left no doubt that someone once lived inside the compound—someone of sufficient importance to own a cast-iron fireback decorated with the royal arms of England. Proof came from fragments found at the edge of the large soil-filled depression.

In letters an inch high, the fragments read L:Y—enough for me to guess at the rest: [HONI:SOIT:QUI:MA]L:Y[:PENSE], the motto of the Order of the Garter—"evil to him who evil thinks." My hard-to-impress colleagues, sure that I was making too much from too little, were less vocal on the last day of the 1977 digging season, when another fragment turned up to add three more letters—[MA]L:Y:PEN[SE.] Later, a detail—the hoof of a unicorn—proved to be in identical position to one on another fireback in England, manufactured in 1621 (page 746).

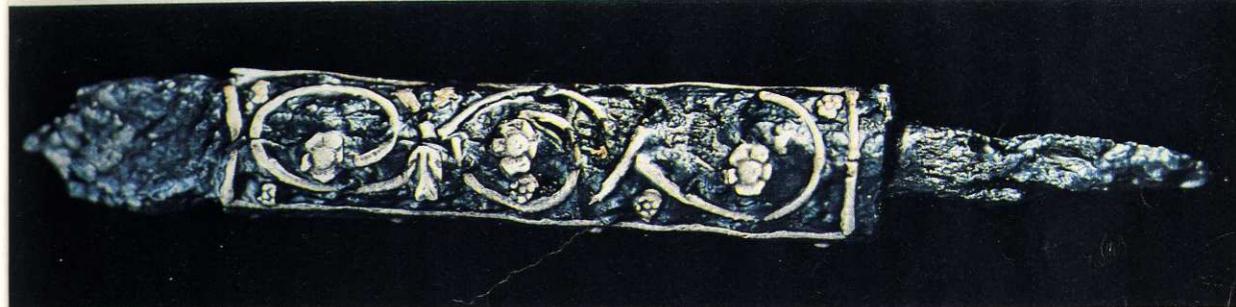
Here was strong evidence that our fireback could date before the 1622 massacre. To ship such a heavy and elaborate household effect from England could only have been the action of someone with considerable money and foresight, someone who was coming to Martin's Hundred with a position to maintain—someone like the "governor," William Harwood.

Was it possible, we asked ourselves, that Harwood had lived inside the fort before the massacre? That the interior of the fort had burned was revealed both by charcoal in many of the postholes and by ashes spreading into the large black patch that Bill Kelso had found in 1970. Scattered along the edge of the depression were burned brick fragments (plus the red baked-clay nest of a mud dauber) and many artifacts that should not have been thrown away, among them the firing mechanisms for five matchlock muskets. We know that in 1625 Harwood had 25 spare "matchcocks" in his arsenal.

**T**HE BIG BLACK DEPRESSION proved to be a silted saucerlike "pond" that fell away at one edge into a shallow well shaft. Filled with silted clay, the well contained an object that took our breath away. Lying on its side was what appeared to be a complete close helmet, the kind worn in Europe by officers and by



**Survival tools.** Bullets cast in single and multiple molds (left) were used to bring down game and answer arrows. Evidence of affluence amid the wilderness, a gilded brass spur (below) was discovered on a site occupied after about 1625.

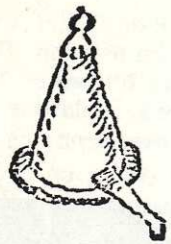


TWICE ACTUAL SIZE



Quality shimmers in the haft of an English table knife (above) encrusted with silver in a floral pattern. A little brass box (left) bears a hand with a pointing finger. Such details might be ignored by the layman, but they ring bells in the minds of archaeologists. The hand is a maker's mark, and an identical box stamped with the same mark was recovered from the wreck of the *Batavia*, a Dutch merchant ship lost off Australia in 1629. The date helped another tiny piece of the Martin's Hundred puzzle fall into place.





**Made in America:** An outstanding piece of Virginia pottery called an alembic, the top element of a three-part still (far left), came almost intact from Site A. The firebox heated such ingredients as water, leaves, and flowers in the middle section.

Steam condensed on the alembic's glazed interior and ran down a channel around the rim, which delivered the distillate—medicinal brews and liquor—to the spout. Pleased with his product, the potter crowned it with a dab of glaze.

A potter's rejects were discovered in a pit in the company compound. Research associate Audrey Noël Hume, the author's wife, pieced some together (right): a cream pan (foreground), bowls, jars, a colander, and small pots called pipkins. Made between 1619 and 1622, they represent the earliest known group of colonial Virginia pottery yet found.

cavalrymen in the 16th and early 17th centuries (page 758). To my knowledge no complete close helmet had ever been found on a North American site.

A telephone call to the late Harold L. Peterson, one of the country's leading armor specialists, confirmed my belief. Pete went further: If the helmet really was complete, he said, it would be the first discovered anywhere in the New World.

Details of the helmet's shape were obscured by rust-bonded clay. How much metal survived? I took a thin dissecting needle and gently prodded the rust. The point met little resistance. Then we tried a magnet. No pull at all. I had to tell a tensely waiting crew that although they had found an object unique in American archaeology, our chances of safely moving it were no better than one in twenty. On the other hand, if we could get it into the laboratory, I was confident that conservator Gary A. McQuillen's new metal-preservative techniques would give him a good chance of consolidating the rust and saving the helmet's shape.

Fearing that we were about to go down in the history of American archaeology as those idiots who failed to save the New World's

first close helmet, we proceeded with snail-like caution.

We took more than two weeks to build protective walls around the helmet and to lift it and a massive block of the well's silt intact into the laboratory for careful excavation. The task was made more difficult by the presence of another piece of armor lying in the silt beside and beneath the helmet. It was an almost complete armor backplate. But thanks to Gary's skillful reinforcing, that, too, came out intact.

We knew that the 1625 census listed William Harwood as owning "Armours, 8," but it had never occurred to me that these would include helmets any more tightly closed than a burgonet (page 760). With its visor pulled down, our helmet restricted the wearer's vision to two narrow slots looking straight ahead. Its collar limited independent head movement, and with iron covering one's ears, the warning snap of a twig in the forest would have gone unheard.

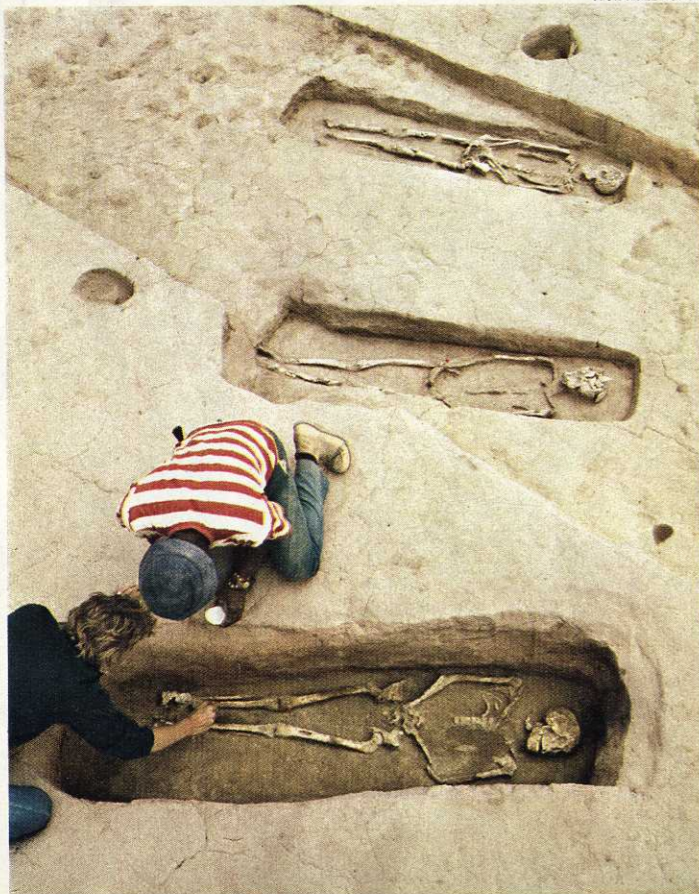
Englishmen setting out with such armor, and whose combat experience had been limited to campaigns in Ireland or the Netherlands, can have had no concept of what war and weather would be like in Virginia.







IVOR NOËL HUMÉ



**Terrible trinity** of disease, famine, and fighting once ruled the settlement. But sickness always threatened. Here at Site A, colonists bury a comrade (above). On and around a fenced lane lay 23 graves, the dead ranging from infants to an old man of about sixty. Some graves were dug in a row (left), probably at the same time, suggesting contagious disease had struck.

Nevertheless, conditions were better than in the early days, when hunger stalked the settlement. "I haue eaten more in [a] day at home then I haue allowed me here for a Weeke," lamented Richard Frethorne, a servant. Throughout Virginia the story was the same. Between 1619 and 1621 about 3,560 people left England to join the colony's settlers. Within those three years, seven out of ten perished.

Thus the Martin's Hundred helmet epitomized the European juggernaut approach to battle, and was to Indian warfare in the 1620's what tanks and helicopter gunships would be to modern guerrilla warfare in Southeast Asia. Although the helmet was the most evocative object we could ever hope to find on the site of a fort, I was sure it was an isolated anomaly, probably discarded for that reason. Wrong again!

Almost exactly a year later, in another silted "pond" not a hundred yards from the first, we were to find a second backplate—and another close helmet.

Not wanting to clear the remainder of the fort's interior before we had located the rest of its palisade lines, we began the 1978 season clearing inland toward the fort from the river. But as soon as we began, we ran into more postholes, holes so far from the fort that they could not be part of it.

They were, instead, the fence, or palisade, lines around an area comprising an apparent storehouse 15 feet by 25 feet and a

longhouse, part dwelling and part byre or stable, 15 by 60 feet.

Beyond the longhouse was our second pond, a hole we think was originally dug by a potter to obtain clay, for into it he later threw his spoiled products. Ironically, he was not the man we had been seeking on Sites A and B; his potting shapes and techniques were different, though the range of his wares covered virtually every vessel that a colonist might need: bowls, dishes, mugs, cooking pots, bottles, water jars, colanders, and even perfuming pots to contain smoldering herbs to freshen the air of sickrooms (page 755).

The pond's contents were not limited to potter's waste, however; they included iron tools, a brass cooking pot, and five lead seals once used to identify bales of fabric from the city of Augsburg in Germany. By another extraordinary coincidence I had found an almost identical seal twenty years earlier on the foreshore of the River Thames at London. Eight are now recorded from sites in England and Europe, but the five from Martin's Hundred constitute the largest single group.

Then there were the military items: a sword pommel; part of a powder flask; a bandolier powder cap; two gun barrels (one inexplicably packed from breech to broken muzzle with small lead shot); iron plates from an armored vest called a brigandine; a throat-protecting gorget; plus, of course, another backplate and our second complete close helmet (pages 760-61). This domestic pond had yielded contents uncannily akin to those from the pond in the fort.

Like the fort buildings, those in what we now called the company compound had been destroyed by fire. We asked ourselves: Could both be the result of the massacre? If so, how were we to prove it?

Buildings with thatched or bark roofs were as likely to be set ablaze by an errant candle flame or a spitting log as by the torches of attacking Indians. On the other hand, houses were too far from the fort for sparks to be blown from one to the other. If Indians were responsible, we needed also to find the graves of some of the estimated 58 Martin's Hundred settlers who died at their hands. We had seen no graves in the excavated corner of the

(Continued on page 762)

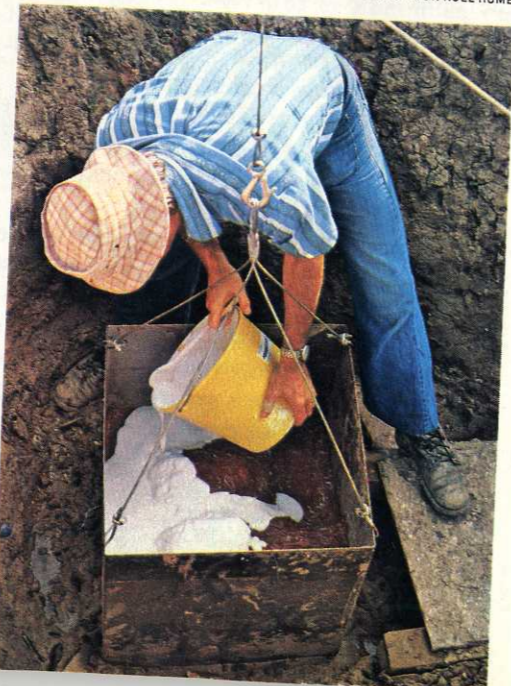




ABOVE, BELOW, AND BOTTOM RIGHT BY IVOR NOËL HUME

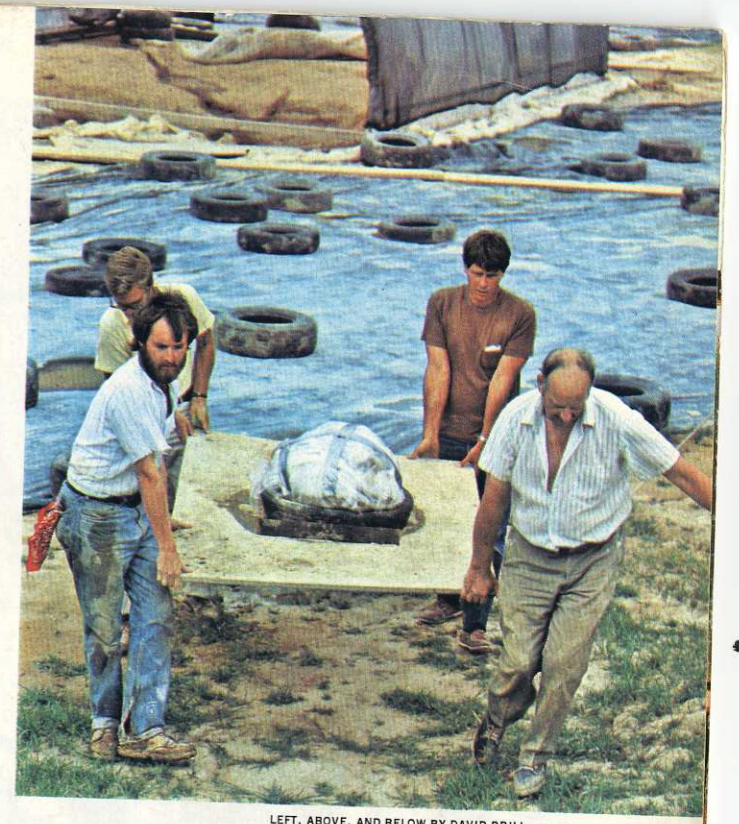
## A Nervous First...

**I**NCREDIBLE FIND issues a challenge: Save it. Virtually nothing but rust remains of the first complete close helmet found in the New World (above), so named because it entirely enclosed the head. In a process that took more than two weeks, a steel frame was built around the helmet and the clay in which it rested. After an armor backplate beneath it was gingerly removed, conservator Gary A. McQuillen applied a silicone molding compound to the helmet's surface—insurance in case it disintegrated—then added a layer of plaster (right). When the 200-pound load was winched up, the team held its breath. It worked.



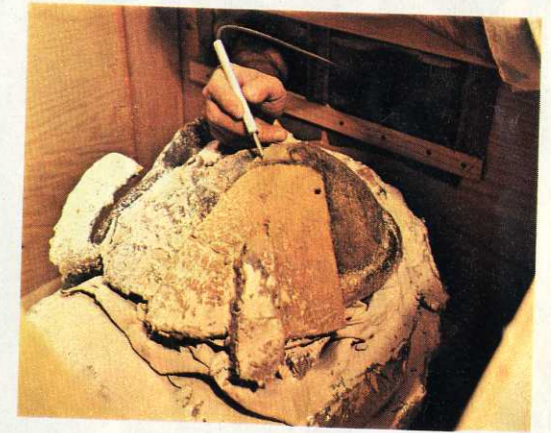
## Becomes a Refined Art

**B**Y THE TIME a second close helmet was found, a hundred yards from the first, the archaeologists had developed a technique that safely unearthed it in six hours. Dispensing with the steel frame and



LEFT, ABOVE, AND BELOW BY DAVID BRILL

silicone mold, the author scraped away the earth down to the helmet's midpoint. Over the exposed side went strips of fiberglass screen softened with cellulose glue. When the glue dried, hardening the screen and bonding it to the rust, the helmet was covered with a blanket of wet paper and then by a protective plaster-of-paris casing. Finally, the buried half of the helmet was undercut, and the mushroomlike plaster mold was inverted, cushioned in an old tire, and borne to the laboratory (upper right).



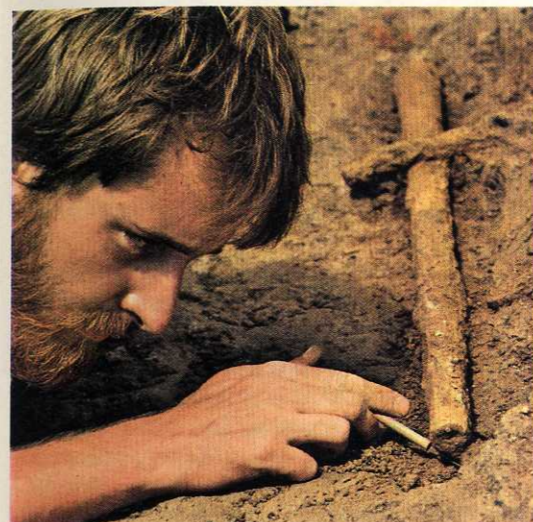
In the lab, conservator McQuillen repeated the process on the untreated half. He then removed the dirt inside the helmet through its open collar and reinforced its interior with fiberglass screen and resin. Next he pried the plaster mold apart, took away the now dry paper, and dissolved the glue and screen on the top half with acetone to confront the original clay and rust. As with the first helmet, he used an airbrasive tool (middle right) to delicately pare the surface down to the firmest remaining corrosion, perhaps a millimeter thick. After the procedure was repeated on the other side, the helmet emerged, though part of it was crushed (right). He mended the damage and, as he had with the first helmet, applied a corrosion inhibitor mixed with lampblack (page 734).



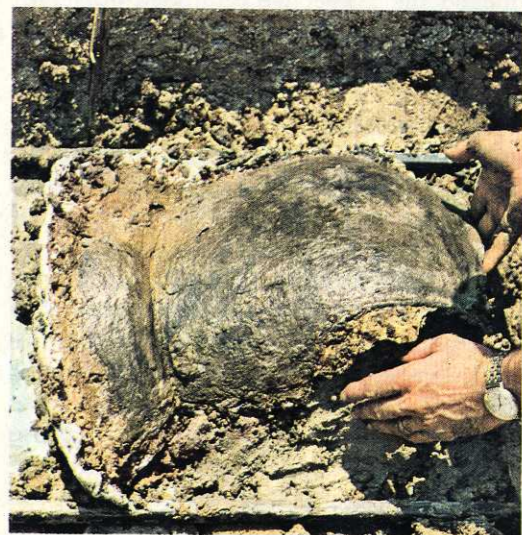




For protection against the Indians, Virginia colonists were warned to carry arms and wear armor. The labeled pieces (above), or parts of them, were unearthed by the author and his team.



DAVID L. ARNOLD



IVOR NOËL HUME



DAVID BRILL (TOP LEFT AND ABOVE)

## Armor vs. Arrows in a Guerrilla War

FOR THE SALVAGES are so light and swift, though wee see them (being so loaded with armour) they haue much advantage of vs. . . . Capt. John Smith thus recognized the same facts of life and death that surely dawned on the Martin's Hundred settlers who fought the Indians. Properly equipped for European-style conflict, in Virginia they would have been encumbered by heavy armor and a close helmet, which hampered movement, restricted vision, and muffled warning sounds like the snap of a twig under a moccasin.

Dozens of armor fragments excavated from the settlement help re-create the battle dress of its defenders (left). Rectangular iron plates (right) that fitted together like fish scales were enclosed between two layers of fabric, forming a vest called a brigandine. Discovered beneath the first close helmet, a backplate (middle right), worn with a counterpart breastplate, was salvaged with its brass rivets and the ends of its leather straps. Iron links (top right) may have formed a shirt of mail.

Student excavator Jeffrey S. Parker uncovers a musket barrel (above) inexplicably packed with lead shot from breech to broken muzzle. The author's theory: Perhaps it stored the lead a potter used in making his glaze.



(Continued from page 757) fort, but crew chief Nate Smith found one in the fenced yard behind the longhouse. It was located so close to an apparent doorway that people would have been forever stepping over it going in and out of the building. Thus, we deduced, the grave's occupant was buried after the house ceased to exist, perhaps interred close to where he fell defending the door while his colleagues fled to the safety of the fort. Imagination was running riot!

Taking more sober stock before we opened the grave, we reminded ourselves that a buried skeleton does not readily identify itself as a massacre victim. We needed evidence of hasty interment, perhaps some windblown ashes from the burned buildings on the grave floor under the body, and above all some evidence of what Agatha Christie fans know as "foul play."

All three were there.

The body had been dumped unceremoniously into the hole, its arms swinging loose and its left buttock jacked up against the wall of the grave. Underneath the body were scraps of charcoal blown or knocked into the open hole. But most revealing of all was the condition of the skull. Physical anthropologist Larry Angel tentatively attributed the cause of death to a frontal blow from a cutting tool like a cleaver, followed by blows to the side or back of the skull while the man lay on the ground.

The back of the head had been reduced to fragments the size of cornflakes and took

weeks to piece together, but once it was done, everyone who saw the skull was struck by the strength of the man's features. About 5 feet 9 inches in height, taller than most of the skeletons we found, and with strong wrist development likened by Larry to that of a swordsman, our man has all the attributes of a soldier—perhaps the owner of the second close helmet.

Harwood survived the massacre, but his military lieutenant, Richard Kean, did not, and it is greatly tempting to believe that we have seen the face of the soldier responsible for the safety of the settlers and who gave his life in their defense (pages 766-7).

**J**UST AS SURVIVORS must have fled from houses outside the fort to the safety of its palisade, so we moved on from the company compound toward yet-to-be-found fort walls. They were there, but not quite where we had expected to find them.

The plan was not triangular, it was four-sided, trapezoidal, laid out by someone trained in the "why don't we stop about here" school of military engineering.

Entered through a small gate on the west side, and protected by inner parapets and a gun platform having a commanding view downriver, this fort must have been designed to defend as much against England's longtime Spanish enemy as against the savages. It almost certainly was the product of instructions given the first settlers when they left London in January 1619.

**A**LTHOUGH THE DISCOVERY of the oldest complete palisaded fort plan unearthed to date in British America was cause for archaeological euphoria, we soon realized that neither it nor the helmets were the real prize.

Most significant of all was that slowly expanding pattern of postholes on our map. New lines of fences took shape; another house, another yard, then at the cliff edge a cluster of 14 graves, extending a line of colonial occupation all the way from the fort to the river. Here, simple but recognizable, was the record of the earliest town plan yet revealed by excavation on a colonial site in British America.

But the plan was by no means unique; on the contrary, it fitted a well-documented pattern of settlements in another English colony where fear of hostile natives made defense a key feature of the plan. In Ireland, plantation settlements in Ulster financed by London companies had three primary elements: a four-sided, fortified enclosure called a bawn, containing the home of the leader; outside it, a wide street, or green, flanked by two rows of tenants' and freeholders' houses; and an Anglican church to cater to the souls of both the settlers and the Irish.

We had our bawn and evidence of domestic life inside it, and we had one row of company houses. We had a cemetery but no church, though we know that the town had one, probably large enough to house 100 or

more people, and substantial enough to leave a "peece" of it for Richard Frethorne to find still standing after the Indians had done their worst. Most of all we needed another row of houses flanking the fort to the north. Without them the parallel between the Wolstenholme Towne plan and contemporary drawings of Ulster settlements was incomplete and inconclusive.

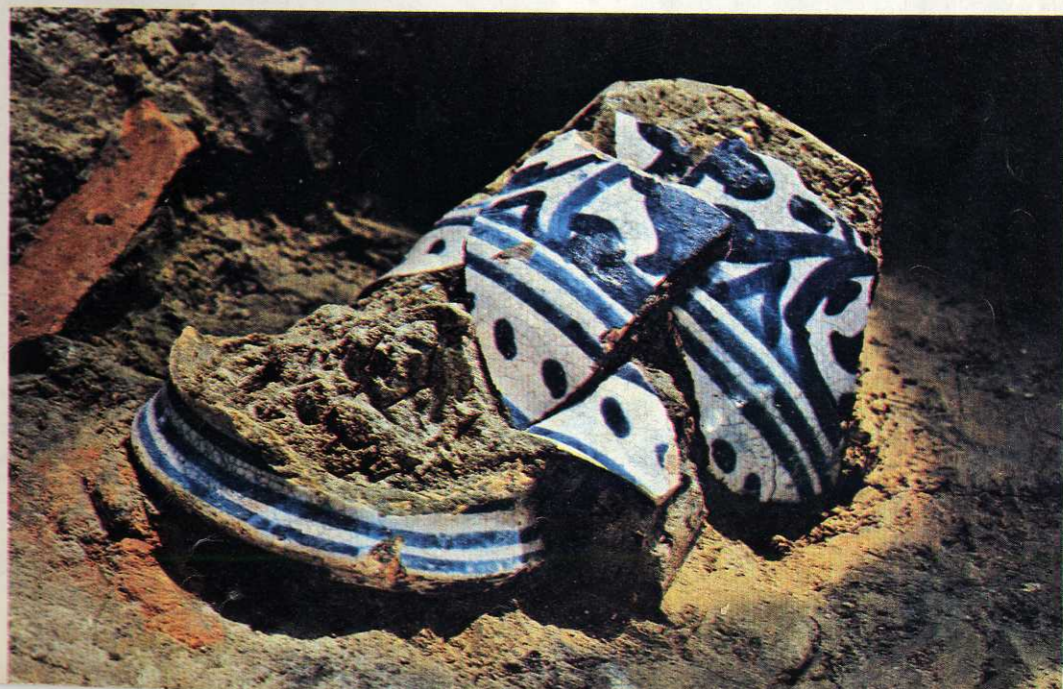
Taking a chance that the weather would hold through November, I asked Eric Klingelhofer to start stripping the plow zone beyond the fort in search of that second line of buildings. He began with widely spaced trenches to minimize the disturbance should the subsoil prove barren. But before we had cleared enough to lay out our grid, the weather turned bad. A week of rain transformed the trenches into canals.

I knew we were beaten. By the time the ground dried enough to let us bring back the grader, nighttime frosts would be turning Wolstenholme Towne's fragile traces into featureless powder. The site would have to be backfilled to protect it until spring.

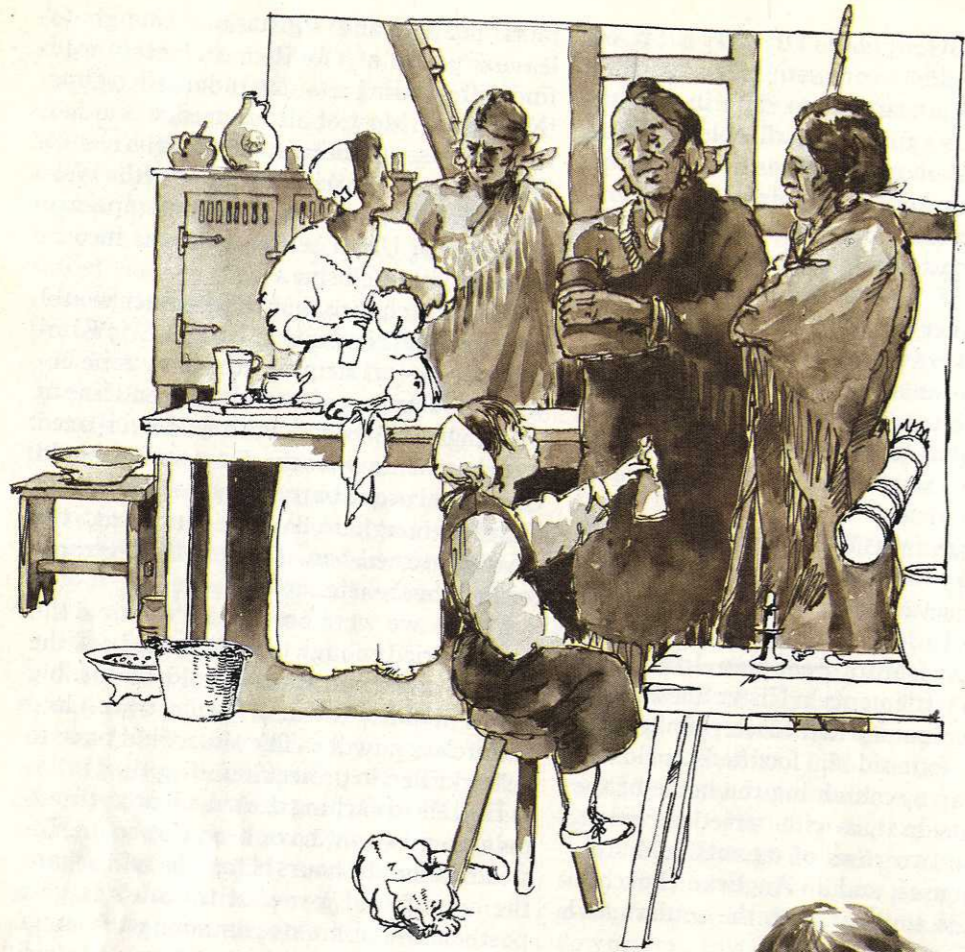
Had the trenching drawn a blank, disappointment would have been less acute. Instead, in the last hours before the rain began, the crew found a row of the site's largest postholes—the molds containing the now-familiar flecks of wood ash and burned clay. Running parallel to the other domestic units, the line lay 150 feet north of the fort gate, the same distance as those buildings were south of it. (Continued on page 767)



**Echoes of pleasure and pain:** Virginia leaf, fruit of the colonists' labor, soothed a settler of the 1630's in an English clay pipe (above)—an important dating tool often made, exported, smoked, and discarded within a year or two. A delftware ointment jar (right) manufactured about 1610 may have held balm to salve cuts or burns.





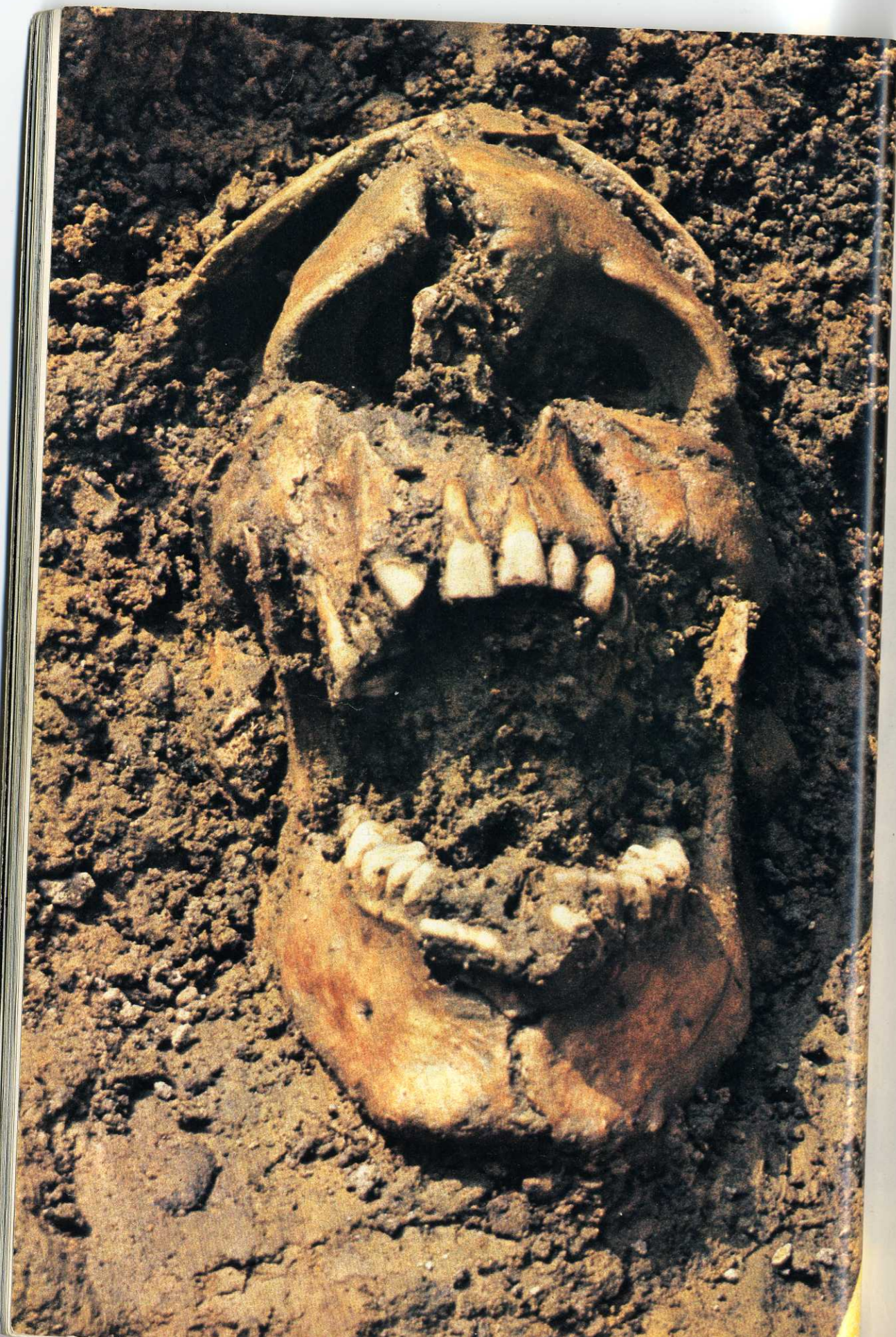


Beginning of the end of Martin's Hundred came on March 22, 1622. Recent relations with the Indians had been so cordial that, in settlements throughout Tidewater, "they came unarmed into our houses [above]... in some places, sate downe at Breakfast." Thus one colonist recounted the coordinated ruse. Suddenly the Indians seized the colonists' own tools and weapons (right) and "basely and barbarously murdered, not sparing... man, woman or childe." Jamestown, alerted by an Indian informant and thus on guard, foiled the attack. But elsewhere nearly 350 settlers died, about 58 at Martin's Hundred. There, archaeologists sought physical evidence to confirm documentation of the massacre.



RICHARD SCHLECHT





**A telltale skull.** A skeleton askew from hasty burial. A grave flecked with charcoal. Here lies testimony to a massacre. A bladed weapon, perhaps a spade or cleaver, split the man's forehead (left). The back and sides of his skull were shattered, and a cut on the left brow suggests he was scalped. Physical anthropologist Dr. J. Lawrence Angel calls him "a striking figure," tall, muscular, with the wrist of a swordsman—someone like Wolstenholme's lieutenant, Richard Kean, killed in the attack. Artist Jay H. Matternes reconstructed this rugged visage (above and right), reflecting the archaeologist's goal: to put flesh on the bones of history.



IVOR NOËL HUME (FACING PAGE); DRAWINGS BY JAY H. MATTERNES

**VISITORS TO THE SITE** ask, "What makes all these holes in the ground so important? What makes the Wolstenholme Towne site unique?"

The questions are direct enough, but the answers are complex. Whenever we open a door into an unknown world, everything we see inside is important. Although traces of the 1622 massacre are intensely interesting and dramatic, and finding the colonists' arms and armor is exciting, what really matters is the new light shed on British life in America in the second decade of colonization.

History shows that in Ulster the Londoners built two fortified communities, Londonderry and Coleraine, but many more of the bawn-protected open villages. Historians have been aware of similarities between Jamestown and the fortified Irish townships, but now we know that the bawn village too had its Virginia parallel—at

Wolstenholme. No town layout of so early a date has been excavated at Jamestown; thus Wolstenholme takes center stage as the oldest British domestic settlement plan unearthed in America.

As fog settled over the site and the first thin films of ice stiffened the edges of puddles, Eric and his team of excavators dismantled their tents. Wolstenholme Towne would keep the last of its secrets through one more winter.

How early are the newly found holes? Why are they so large? Can they be a "peece" of the church? If so, why are the graves on the other side of the green? Do the holes really give us the second line of buildings we so badly need to complete the picture?

The questions were enough to keep us all in hot debate until Virginia's welcome springtime sun thawed this rich historic soil. More answers at Martin's Hundred now lie tantalizingly close at hand. □