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Editorial Preface: The Ryders Point Site

The publication of the following report by the late Julius Lopez on the vanished Ryders Pond site in Brooklyn has been delayed for the past few years by considerations of space, finance and policy. Its eventual publication, however, was inevitable and obligatory; it may well be the only report ever to be made on a Brooklyn site by a competent archaeologist dealing with the material in relatively modern terms. The data had been assembled and part of the report was in manuscript before Mr. Lopez's death on December 5, 1961. It was then turned over for completion to a colleague, Stanley Wisniewski, by Mr. Lopez's widow, Mrs. Eleanor Lopez. In its completed form it was much too lengthy for publication in a single or even two issues of The Bulletin, but its uniqueness as a record precluded thought of serious cutting or condensation. After much discussion the decision, approved by Mr. Wisniewski, Mrs. Lopez, and the editorial committee of NYSAA, has been to publish in three parts: the site history and lithics section in this issue, the ceramics and conclusion section and bibliography in the July, 1972, issue, and an addendum on four kaolin pipes by the late F. Geiger Omwake in a subsequent, probably the November, 1972, issue.

The question may be raised as to why the two parts are not published in consecutive issues, the November, 1971, and the March, 1972, issues. Several editorial factors are involved but principally that there are on inventory several contributions which should not be held up any longer. The three parts of the Ryders Pond report can stand on their own and, except for the bibliography, do not interrelate essentially.

The frame of reference of archaeological hypothesis within which the report was written is, of course, out-of-date. Much new light has been cast during the 1960's on the identities and relationships of the cultural phases and their associated materials with which Lopez deals, but the importance of the data remains; the presence of certain components, or phases or facies is attested, however they are to be interpreted and fitted into current sequences. Lopez was a perceptive observer and, despite references to Fowler's outmoded terminology and discarded notions about cultural patterns in New York, he has much to tell us in this paper.

L.A.B.

Junior Author's Preface

The major portion of "The Ryders Pond Site" was compiled by the late Julius Lopez. His untimely death in 1961 stemmed the flow of many fine articles which he so regularly contributed. He had a keen grasp of the various phases of local archeology, and his dedicated efforts resulted in many, fine well researched manuscripts, especially in the field of ceramics, his main interest.

A survey of his literary effects revealed the scope of his activities. His was the ability to work on several articles simultaneously, systematically adding to his many notes and folders, carefully checking every available publication and constantly conferring with other authorities. I was privileged to share his interest and enthusiasm, both in the field, and in the lab.

The task of completing the accompanying article proved to be a bit more formidable than I had anticipated, inasmuch as I always felt more at home with a trowel than with a pen. Nevertheless with the encouragement and helpful cooperation of my many good friends and associates the task was accomplished.

I have conscientiously endeavored to retain the original thoughts, format and presentation as basically outlined by Lopez. Needless to say, gaps had to be filled, charts, photos, and references had to be edited and checked. Not having the author's grasp of the subject, of course, presented many frustrations, and cost countless hours of research. However, I

COVER ILLUSTRATION: Fig. 1, Celt. Figs. 2,4,7,8, Gorget fragments. Fig. 3, Birdstone fragment. Figs. 5,11, Bannerstone fragments. Fig. 9, Pebble Pendant. Fig. 6, Pebble Net Sinker. Fig. 10, Stone Tube fragment. Fig. 12, Axe Blade fragment. Fig. 13, Polished Hematite Pyramid. Fig. 14, Steatite Pendant (?)*

*This is actually a platform pipe with groove for suspension as pendant. Ed.
feel amply rewarded, not only in the education it has provided, but in the realization that I was able to salvage, to the best of my ability, the fruits of those many long hours that Julius Lopez had expended on "Ryders Pond."

I am indebted to many individuals for their most helpful assistance, especially to Roy Latham, who made the collection accessible to the author and who later extended the same courtesy to me for further study. The correspondence and notes of Lopez point out the cooperation of persons such as J. Witthoft, C. F. Wray, and the late H. G. Omwake, who contributed an analysis in their various individual specialties. No doubt there are many others who I am neglecting, for J. Lopez had a wide range of friends, both amateur and professional, who freely communicated their views and opinions whenever called upon.

Lastly I wish to acknowledge my deep gratitude to Eleanor Lopez who so generously made all the notes and research material available to me, and who undertook the arduous task of typing most of the following words, through the various preliminary stages, to its present long awaited finality.

Stanley Wisniewski
Metropolitan Chapter

THE RYDERS POND SITE, KINGS COUNTY, NEW YORK
Julius Lopez, NYSAAF
Stanley Wisniewski

Introduction
At one time there were undoubtedly numerous aboriginal sites in Kings County on the western end of Long Island in coastal New York, especially along the shoreline of the East River, the Narrows, Gowanus Bay and the bays of Gravesend, Jamaica and Sheepshead. Today, however, Kings County, better known as Brooklyn, forms part of the busy skyscraper metropolis of Greater New York City. Not only are the sites gone, but remaining to us is not even a single site report, only a few place references here and there in the early literature. Of these, most refer to Indian place names which Beauchamp (1907), Tooker (1911) and Bolton (1934) compiled from historical and apparently in many instances, from quasi-historical sources.

Archeologically, about all that was known is that there were once "immense" shell heaps at Carnarsie or Flatlands and Bergen Island (Parker, 1920, p. 582), and at 37th Street near Third Avenue (Bolton, 1934, p. 145). It has also been said (Parker, 1920, p. 582) that in 1837, a cache of stone and flint blades, enough to fill "a wagon load" was found at the Narrows. Furman (1972, pp. 31-32), who was Parker's source of information, wrote:

"On digging a few feet below the surface...more than a wagon-load of Indian stone arrow-heads were found lying together, under circumstances calculated to induce the belief that a large manufactory of those articles once existed at this place; they were of all sizes, from one to six inches long, some perfect, others partly finished. There were also a number of blocks of the same kind of stone found in the rough state, as when brought from the quarry; they had the appearance of ordinary flint, and were nearly as hard: not only arrow-heads, but axes and other articles of domestic use were made from these stones."

Adding to these accounts is a tantalizing, not to say an aggravatingly inadequate, site description, also by Furman (1975, pp. 98-100) about a barren sand hill 70 ft. high and covered with stones, many of which were completely "vitrified" and others nearly decomposed
by the action of fire. About 1.5 ft. below the surface and in some places between 2 and 3 ft. below, there was a
distinct layer of "ashes and cinders, interspersed with pieces of coarse earthenware and the stone heads of Indian
arrows." The inventory also included "the remnants of rough tobacco pipes formed of clay," and one "almost
entire which we found in the sand in this hill."

Another bit of information which has come down to us is that there was a "Burial place in South
Brooklyn found in 1897 on Avenue U and near Ryder's Pond and Sheepshead Bay" where there were deep beds
of oyster shells. "Pottery was found and over a dozen skeletons" (Parker, 1920, p. 582).

Fortunately, we are now in a position to say more about this Ryders Pond Site, the subject of this report,
thanks to Roy Latham of Orient, L.L, who made available for study a collection which had been passed on to him
by D. B. Austin, now deceased. The site was explored by Austin and, apparently, to an extent, by members of his
family in the late 1890's and early 1900's.

In the ensuing pages an attempt is made to salvage and interpret the data. However, it should be borne
uppermost in mind that there are no field notes and no stratigraphic data. The assemblage is a surface
accumulation of items. All we know is that the objects came from within plow depth. A great deal of information
has been lost forever. Therefore, this paper is bound to have its limitations. Notwithstanding, the collection is
most interesting since it discloses some hitherto unknown facts about the archeology of coastal New York and
helps enrich an otherwise almost barren picture as far as Kings County is concerned.

RYDERS POND

The site was situated near Sheepshead Bay on the southern coast of Brooklyn in the vast outwash plain
below the morainal ridges which stretch eastward from the Narrows to Prospect Park and beyond, where they
were left behind by the Wisconsin icefront during late Pleistocene times.

The principal feature of the site was a spring-fed body of water. The Dutch called it Strome Kill. Later it
was known as Ryder's Pond, after a local family. Today the area is largely engulfed by a public park, the
Brooklyn Marine Park, and has been altered accordingly. The northern section of the pond was filled in and a
tidal inlet, which once joined it across a swampy alluvium, has been widened into the present Gerritsen Basin,
named after Hugh Gerritsen who, decades ago, erected a dam for a flour mill across the northern end of Gerritsen
Creek.

The original topography is no longer recognizable. However, the precise location of the site is preserved
in a map prepared by D. B. Austin, and published in 1920 by Bolton. In terms of present city blocks, the site was
apparently bounded by Avenue R, East 32nd Street, Avenue W (or Whitney) and Stuart Street with Avenue U
intersecting it.

According to Bolton, who was apparently familiar with the place, there was a sandy beach at a
premonitory near Avenue T. Otherwise; the immediate terrain was marshy, with salt meadows on either side of
the pond. It was the sandy stretch on its west bank and the broad flat land behind it which apparently underwent
the heaviest occupation. Here is where the burials were; Parker, as previously stated, mentioned "over a dozen
skeletons." Bolton (1922, pp. 159-60) added that they seemed to be "regularly disposed, about 35 feet apart," and
in another publication (1934, p. 146) that they had been "disturbed in the opening of Avenue U." Austin's map
was evidently not brought up to date because it shows only one grave (near the intersection of Avenue U, Stuart
Street and the old Gravesend Neck Road). Unfortunately, there are no details for either this or the other graves.
Consequently, we do not know if they were refuse or pit burials and whether the remains were extended or flexed,
or if they were accompanied by grave goods.

In preview, most of the artifactual specimens are attributable to the Clasons Point
focus, East River aspect, which equates to the late Owasco-Iroquois period in central and southern New York State, northeastern Pennsylvania and northern New Jersey. However, the site was mixed and had a long history, as there are cultural materials which stretch in typological sequence from Archaic type artifacts and early aboriginal pottery to late Indian vessel forms, rum bottle fragments and colonial and post-Revolutionary goods. Some trade items are also present. In this connection, Ryders Pond was thought by Bolton to have been a station of the historic Canarsee for which reason a brief account will be given in the next section of what little is known about them.

The Canarsee

During the contact period Long Island was made up of a confederacy of 13 chieftancies, known collectively as the Metoac, also written as Meitowax, Matouwax, Matouack and Matowcas. The Canarsee (or Canarise) at the western end of the island. are said to have been the most powerful tribe, and they held at one time or another most of King's County, lands as far east as "Yemacah," or Jamaica (Queens County), Wards Island, Blackwells Island, Governors Island, and quite likely, the lower tip of Manhattan Island. It has been said also that the tribe had a subchieftancy at "Nayack," now Fort Hamilton, on the eastern side of the Narrows in Brooklyn.

Bolton, who provides this information, also added that it is probable that the Canarsee made a settlement on Staten Island about 1652 and that it may have been on its eastern side, opposite the present Fort Hamilton district, from which they agreed to migrate on sale of their homelands. The Canarsee chieftancy of the Matouack are thus found in possession of some rights on the island, and their sachem, Matano, was described in 1664 as "the chief of the Staten Island and Nyack savages." Bolton also stated that at one time Staten Island appears to have been occupied partly by the Canarsee, the Rockaways, their eastern neighbors, and the New Jersey tribes of the Raritans, Hackensacks and upriver Tappan.

Bolton (1934, p. 146), thought that the Ryders Pond site might have been Shanscomacocke, an Indian village district mentioned in a 1664 conveyance of sale to the colonists. Also, that the natives may have continued their occupancy until 1684, when they confirmed the sale of a much larger tract known as Makeopaca, "a great cleared space." This transaction included the Shanscomacocke district which was incorporated into the colonial township of Gravesend.

The principal site and headquarters of the Indian population, however, was Canarsie, a name which still appears on the city map in Flatbush. The village and its planting fields extended inland from the present Canarsie Beach Park as far as Avenue J where it centered on East 92nd Street (Bolton, 1934, p. 146).

Tooker (1911, pp. 32-33) stated that the earliest appearance of the Canarsie name is in a document dated January 21, 1647, in which there is an entry: "We Willem Kieft-have given and granted to George Baxter and Richard Clof, with their associates, a certain tract of land situate on the south side of Long Island called Canarsie with all the meadows belonging." (Col. Hist. N.Y., vol. xiv, p. 61). Variations are: Conarasset, 1656; "Piece of meadow land near the Canarisse," 1661; Canarysseen, 1666; Canaise, 1666; Canarisea, 1680; Kanarsingh, 1719.

The meaning of Canarsie is supposed to be "the fenced place," so called because it was at or in the vicinity of the fence, or boundary, which divided the lands from the colonists. (Beauchamp, 1907, p. 98).

To quote Tooker (1911, pp. 32, 33), who gives more information on the subject:

"We cannot state positively at this late date whether the name belonged originally to the fenced village of the tribe or to the whole territory, as it was afterwards applied by both the Dutch and English. The Dutch manured and planted the lands.
here many years with consent of the Indians before any purchase was made, as stated in the Nicoll patent of 1667. Consequently the lands were more or less fenced in, both that of the Dutch and also that planted by the natives. This is reiterated in the "Indian deed of April 16, 1665, when: Wametappenck, Sachem of Canaryssen and (others named) lawful owners of Canaryssen and the appendages thereunto appertaining. . . sold to the inhabitants of New Amersfoort. . . a parcel of land... with conditions that the purchasers once for always a fence shall be set at Canarissen for the protection of the Indians' cultivation, which fence shall thereafter by the Indians be maintained and the land which becomes inclosed in fence shall by the Indian owners above mentioned all their lives be used.' (Stile's Hist. King's Co., P. 71). From this and the fact that their village was called Keskaechquerem I incline to the belief that the name (Canarsie) belongs to all the territory that was fenced, until at last there was nothing left to the Indians but the small portion fenced in at the present Canarsie."

According to Furman (1875, pp. 19-22, 275-76), the old Dutch inhabitants of Kings County had a tradition that the Canarsee greatly feared the Mohawks and paid them an annual tribute of dried clams and wampum. He continued by saying:

"When the Dutch settled here, they persuaded the Canarsees to keep back the tribute; in consequence of which a party of the Mohawks came down and killed their tributaries wherever they met them. So great was the dread that these Indians afterwards entertained of the Iroquois, that when a party of the Iroquois, during the French war, were taken prisoners and imprisoned in the Jail of this county, the Canarsees avoided them with the greatest care, and seemed to be afraid even to come where they should see them."

Furman also commented that in 1655 the Iroquois raided Staten Island, and then Long Island to chastise the Indians there for having discontinued the payment of tribute under Dutch instigation. The tributaries apparently thought that the Iroquois would not dare at tack them so close to the European towns. The Canarsee seem to have suffered the severest consequences for Furman writes that the Iroquois "destroyed the Canarsee tribe,"

"In 1655, a large body of Northern Indians made a descent on Staten Island, and massacred 67 persons; after which they crossed to Long Island, and invested Gravesend; which place was relieved by a party of soldiers from New Amsterdam. It appears from the records that these Indians were on their way to commence a war against the Indians on the east end of Long Island" (Furman, 1875, p. 347 footnote).

"It was undoubtedly directly after leaving Gravesend that they (the Iroquois) fell upon and destroyed the Canarsee tribe, and afterwards proceeded down through the island with that terrible foray of murder the account of which has been preserved in tradition to this day: and to prevent a repetition of which the Consistory of the Dutch Church at Albany undertook to be the agents to see that the required tribute was regularly paid by the Long Island Indians to the Five Nations." (Furman, 1875, p. 21).

The last of the Canarsee died in 1832 and was buried in a shroud made by Mrs. Remsen, widow of Anthony Remsen, formerly of Brooklyn. This last member of the tribe also told her about the tradition of the destruction of the Canarsee tribe by the Mohawks as a result of the refusal to pay tribute:
“This Indian told her that three or four families of them, having become alarmed by the shrieks and groans of their murdered friends, fled for the shore of the bay, got into their canoes, and paddled off to Barren Island, forming part of the great south beach, whither the Mohawks could not, or did not follow them. They returned late on the following day, and soon ascertained that they constituted the only living representatives of their entire tribe, who had the night previous laid them down to rest in apparent security; and that no trace was to be discovered of their vindictive and barbarous enemies. It was some days, however, before they ventured to return permanently to their old residences, and not before they became entirely satisfied that the Mohawks had returned to their homes.” (Furman, 1875, pp. 22-23)

From the foregoing it looks as though Canarsie was a specific place, but that it was later used to denote a larger area and that the Europeans used the name as a tribal designation for all the Indians in most of Kings County and for those who occupied a piece of land in what is now Jamaica in the neighboring county. It is said that the natives called the latter Conorasset when they asked Peter Stuyvesant, Governor General of New Netherlands, for permission to occupy the tract. The name appears as such in the petition, March 10, 1656, but, interestingly, in the permit granted by the Dutch, the land is called “Canaresse” and was apparently derived from the headquarters site of the natives. (Tooker, 1911, p. 49).

Unfortunately the 1655 destruction of the Canarsie by the Iroquois still remains in the realm of tradition since a verifiable historical account has not been located to date, but the chances are that the Canarsie had already been reduced in numbers prior to the Mohawk raid due to wars with the settlers during the Indian Uprising 1643 and others. It would also seem from late references to the Canarsie that the annihilation was not completed. It is quite possible though that a particular settlement might have been wiped out.

**CHIPPED STONEWORK**

Items in this category constitute the bulk of the collection and occur in a surprisingly wide assortment of shapes, sizes and grades of materials.

*Lithic Materials:* On eastern Long Island chipped stone artifacts were predominantly, though not exclusively, made from pebble quartz. This is in sharp contrast to the varied assortment of stone types at Ryders Pond on the other end of the island. No doubt great use was made at Ryders Pond of the varicolored flints and other stones carried down by glacial action from the upper Hudson Valley—the coal black Helderberg flint, the black and rather sandy Oriskany flint, the usually grayish and unmottled Onondaga Limestone chert from outcrops of Devonian age, and the Normanskill red, green and black shale flint deposits of Lower Ordovician age. Occasional trips up the Hudson River to these sources to quarry the materials were likely, as was procurement through trade channels.

A good percentage of the stones are not indigenous to the area, either in natural form or as glacial debris. The nearest known sources of argillite are the exposures along the Delaware River north of Trenton, New Jersey. In that state, argillites are an important factor in the petrology of chipped artifacts at all periods but especially before Late Woodland times. Some of the argillites from Ryders Pond are like those from the Trenton vicinity but others are of varied types from unknown sources, possibly from elsewhere in New Jersey or from Pennsylvania.

Some of the red, yellow and brown jaspers from Ryders Pond match samples from the Vera Cruz and Durham quarries in Pennsylvania, but a few artifacts appear to have been fashioned from pebble Jasper which is found in glacial drifts in lower New Jersey. The pebbles generally have a thin white crust encasing the Jasper, which is often a dull yellow in color.

There are other stones which look as though they may have been imported. A few
<table>
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<tr>
<th>TABLE 1</th>
<th>Projectile Point Classification and Material Type Breakdown</th>
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<td>ORISKANY</td>
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<tr>
<td>TYPE</td>
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<tr>
<td>TRIANGULAR</td>
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<tr>
<td>FISHESPLAN</td>
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</table>

TOTAL: 6 124 93 59 31 25 326 10 37 16 142 12 2 15 902
are like the mottled bluish type of Onondaga chert found in western New York. They may have come from there or from New Jersey, or from Pennsylvania, where pebbles of this distinctive chert are common in till in northern Pennsylvania and are found in the river gravels of the Susquehanna down to the Chesapeake Bay (Witthoft, 1952, pp. 470-71).

Among the unknown flints there are some similar to jasper in texture and sheen but they are white to light gray. They may be iron-free varieties, possibly from the jasper producing areas in Lehigh and Bucks counties, Pa. There are also one specimen of rhyolite, presumably from the same state, and various translucent chalcedonies. Some are from unknown sources.

**Triangular Points:** Most of the projectile points fall under this class. The equilateral form (363 specimens) predominate in an approximate two-to-one ratio over isosceles points (176 specimens) and indicate that the heaviest occupation at the site occurred during the Clasons Point period, East River aspect, as is corroborated by the ceramics.

The materials are mostly Hudson Valley flints and locally available quartz. (See Table 1). This is the usual situation on late Woodland sites around the mouth of the Hudson. This particular collection, however, has a non-conformity in that there is an important minority presence of argillite (and some shaley stones) totaling 68 specimens, or close to 13% of all the triangulars. Trade with the New Jersey-eastern Pennsylvania region might, in part, be the answer, but it is strongly suspected that most either formed part of an earlier "argillite complex" carried to the site by peoples from that direction, or that they were rechipped from non-triangular points found on the site by its late occupants.

To be sure, not all the flint and quartz specimens belong to the same horizon. Some were undoubtedly earlier. Over much of the eastern United States triangular arrowheads preponderate during Late Woodland times, especially those with a generally more carefully controlled flaking. In the Northeast the relatively thin equilateral triangle increased in popularity with the advance of the Woodland period, but large triangular points, both isosceles and equilateral in shape, are a definite trait of Middle Woodland cultures over the area as a whole (Ritchie, letter 12/17/56; 1959, p. 34). They also appear on earlier levels and even in the Archaic.

The small points (Plate I) with strongly excurvate sides might be Middle to Late Archaic as may be some of the long isosceles triangulars, also with generally excurvate sides as in Pl. 1, Figs. 29, 30.

Obviously, this analysis is far from satisfactory as some of the particular types cannot be pinpointed to particular horizons but, as a group, they serve their purpose in confirming a heavy Clasons Point settlement.

Of interest is a class of asymmetric points possessing one basal barb longer than the other. There are not many in the Ryders Pond collection but the feature occurs on both equilateral and isosceles forms and is found in flint, quartz and argillite (P1. I, Figs. 47, 48, 49). As Ritchie (1953, pp. 36-37) has stated, some were undoubtedly accidental variants of usual types but exaggerated examples must have had a special purpose. It is possible that the side with the shortest barb was mounted parallel to the shaft to create a single-barbed harpoon arrow to shoot at large fish.

Present evidence suggests that the asymmetric missile heads are late, since they seem to appear on Owasco component sites (Canandaigua, Hilltop, Wilbur Lake and Wickham sites) in upper New York State and at the Bell-Philhower site in northern New Jersey. On the coast, they are known from Staten Island (Skinner, 1909a, Plate XII: 7-10); also from the Clasons Point site in Bronx County (Skinner 1919, Plate XI: a, c, d); the Schurz site, also in the Bronx (personal knowledge) and Ryders Pond and the Indian Field site in southwestern Connecticut (Powell, 1958; fig. 8: 7-10), all of which had components of the Late Woodland Clasons Point period.

**Non-Triangular Points:** Without stratigraphy there is no choice but to discuss the rest of the chipped points under this broad heading, not without some head scratching.
because, while some basic trends are apparent, there seem to be "wheels within wheels" in a highly complex situation involving separate origins, possibly some borrowing, cultural interactions and merging traditions. Moreover, some cultures appear to have overlapped in time and space elsewhere and then to have bounced into the coastal region after a temporal lag.

Many of the items from Ryders Pond would be at home on Archaic levels but there seems to be a growing conviction that some Archaic traits, particularly in projectile point categories, endured into Early and, to an undetermined extent, into Middle Woodland times (Smith, 1950, p. 147). The site adds to this conviction. As will be seen, it produced Early and Middle Woodland pottery. Some of the points must have belonged to these corresponding periods. However, many, if not nearly all the types first appear in Archaic horizons elsewhere. For instance, ignoring for awhile the materials from which they were made, some of the stemmed and side-notched artifacts are Lamokoid, specifically Plate 2: Figs. 1-27.

These constitute roughly about 33% of the non-triangulars. If we now refer to the Oberlander and Robinson components of the Brewerton Laurentian (Ritchie, 1940, pp. 27-32, 64-67) in upper New York State, we find that nearly every point type found on these sites can be duplicated in the Ryders Pond materials. It is certain that a Lamoka manifestation is not present at Ryders because there is no evidence of a total Lamoka complex which seems to be generally the case outside of the Lamoka region in central and western New York State. By and large, however, narrow Lamokoid points are found eastward from there and also southward along part of the Susquehanna River in Pennsylvania (Ritchie, 1944, p. 292), in northeastern New Jersey (personal knowledge), and down the Hudson into coastal New York.

In this connection, many sites, such as those Ritchie (1958) investigated in the Hudson Valley pose a problem in that they imply, first an occupation by Lamoka-like peoples followed by Laurentian groups, notwithstanding the possibility that there might also have been a single Frontenac-like period when Archaic peoples used a combined or coalesced Lamoka-Laurentian artifact assemblage. Ritchie hypothesized (1944: p. 32) a "cultural contact and interaction over a wide area of peoples having these two contrasting traditions, resulting ultimately in the dominance of the Laurentian and the gradual assimilation and disappearance of most elements of the Lamoka." The Lamokoid point does not seem to have been one of the elements which disappeared, at least not entirely.
Besides the Lamokoid and Laurentian aspects of the subject, some of the Ryder specimens, such as fishtails (Plate 3; Figs. 8-10), are associated with the Orient complex (radiocarbon dated at ca. 1043 B.C. and 763 B.C.) of eastern Long Island, but not exclusively, as they also occur in central New York State, New Jersey and Pennsylvania (Ritchie, 1959, pp. 90-91). However, there are only 10 fishtails at Ryders Pond and none resemble the many graceful examples known from Orient which also produced lozenge-shaped and lobate stemmed points similar to Plate 3; 12-18. The latter, made principally of quartz, is a surprisingly frequent form at our Brooklyn site; interestingly, one of the lobate stemmed specimens was chipped from a mottled red, yellow and white chalcedony which is unmistakably Ohio Flint Ridge material. According to Ritchie (1959, p. 33) the type was presumably an Adena innovation from the Ohio Valley and overlapped the period when the Orient Fishtail form reached its climax. Thus, Ryders Pond also has projectile point equivalents in eastern Long Island and westward with Adena.

Up to this point we have largely ignored the materials from which the non-triangulars were made. While lithic preference is primarily a regional trait and secondarily a cultural trait in most instances, as stated by Holland (1955, p. 175) there are some implications in
Table I showing separately the flint, quartz and argillaceous points. It could be said, for instance, that the flint points made predominantly of Hudson Valley flints tie in with Lamokoid and Laurentian radiations spearheading down the Valley to the coast. There is no doubt, however, that some, if not most of the points, were made locally from glacial debris. Points made of quartz are not plentiful up the Valley but they are common on the coast where the material can be picked up just for the bending. This is a regional, not a cultural trait because, aside from the material, most of the chipped stones are typologically the same. This is only partly true of the argillite points. Since this particular stone is not native to the coast, but abundant in New Jersey, our attention now shifts to that State in search of a possible explanation for the "argillite complex" at Ryders Pond.

As Cross (1956, pp. 1,191) remarked, for eighty-three years the Abbott Farm site, near Trenton, in the Delaware River Valley was one of the most controversial archeological sites in the East, and more than 100 books and articles were written about the "argillite culture" discovered there and the crude points which were first attributed to "glacial" or "palaeolithic" man or to his immediate descendants. She dismissed the controversy however, by concluding that "There was no 'argillite culture' as a separate entity which can be placed in a given time."

But Byers (1959, p. 238) suspects "that the door is not shut on the possibility of a subdivision of the Archaic stage (in New Jersey) in which argillaceous materials were preferred for making stemmed points." I agree. In Plates 4 and 5 we see that at Ryders Pond the "argillite complex" includes some long slender Lamokoid and some suggestive Laurentian-like points. These indicate that the same influences which reached the coast must have reached the Abbott Farm district where the types were made from the local material after which they reached here. Lozenge, lobate stemmed and a fishtail of argillaceous stones are also present. There are also broadbladed stemmed and lanceolate forms which are not associated either with Lamoka, Laurentian, Frontenac, Orient or with the Susquehanna Transitional period. Instead they are like the Steubenville Stemmed* and Steubenville Lanceolates* from the Upper Ohio Valley. Some pentagonal points are also present, but these were apparently rechipped from damaged Steubenville. The complex also includes the so-called New Jersey fish-spear (Plate 5; Fig. 24) and possibly some triangular points.

*Now called Cony by Kaeser for coastal New York and Fox Creek by Funk for Upper New York. See NYSAA Bulletin No. 44. Ed.
The Steubenville points which account for about 10% of the non-triangular points are of particular interest. Mayer-Oakes (1955-pp. 18-19) expressed the belief that in the upper Ohio they were derived from the late Paleo-Indian types which entered the area from the west at about the time of the post-glacial climatic period and that they might have lasted until late Archaic times.

Dragoo (1959, pp. 210-211, 213-214) however doubts any great antiquity for the Steubenvilles; he feels that they were added to a Laurentian-like complex in the upper Ohio to form the base of Early Woodland, particularly Adena.

The Ryder Pond specimens are similar to the two western Stuebenville types, not only in outline, but in the known variations for the pair, and in the occasional basal flute scars which some have interpreted as vestiges of Paleo flutings. There is still another resemblance in that some of the local Steubenville Lanceolates are indefinite or crude lanceolate types and appear to merge, as MayerOakes (1955, p. 15) stated, with the category of leaf-shaped blanks.

Steubenville types occur in other coastal collections. They were also present at the Abbott Farm Site. It would seem, then, that the Steubenvilles from the upper Ohio were added to the "argillite complex" in New Jersey, after which it was carried to the coast.

**Blades and blanks.** Not illustrated are a series of thick primary blanks in various sizes, ranging from the "quarry blank" sort to the turtlebacks, and to small ovoid, lanceloid, and trianguloid forms, some of which were probably preparatory for the manufacture of projectile points and other tools.

In argillaceous blades the two basal fragments (Plate 5, figs. 20, 21) suggest lengths up to 5 in, or more. At the Schurz site, Bronx County, two complete specimens were found, the largest measured 7" long by 2-5/8 in. wide.

**Aberrant Specimens.** There are two curious objects in the collection. One (Plate 6, fig. 29) made of quartz, has 2 side-notched indentations and might have been hafted for use as a knife or scraper. The other, (fig. 30) is a broad bladed, flat object, bifacially chipped, with a single shoulder; it is broken across the top. Whatever the object was, the stone is an exotic waxy white chalcedony, which may or may not be Flint Ridge material. The stone is unknown for these parts and differs from the other chalcedony in the collection.

**Other Stonework.** Rough stonework consists of 6 plain hammerstones,
12 pitted ones, 22 notched net sinkers, 4 sinewstones (three broken) and 2 complete and 5 broken pestles. Also present are paintstones of limonite—a hydrated oxide of iron, sometimes called "brown hematite" used as a source of red pigment—and deeply scored pieces of amorphous graphite used for a black pigment. The collection also has two natural stones. One is a flat, ovate pebble naturally perforated from a once fossilized piece of coral which had subsequently dissolved; it was probably used as a pendant. The other is an ovoid stone with a short neck and suggests a plummet. The specimen is similar to that reported by Smith (1950, Plate 15, fig. 43) from the Grantville site, but both are problematical plummets because of their crudeness.

Polished Stone. There is a considerable variety of polished stonework. Items include 8 grooved axes, 3 adz specimens and 15 celts; the cover illustration shows a series of miscellaneous items—bannerstone wing-tip fragment (fig. 11), a tubular pipe (?) fragment (fig. 10), a number of badly fractured gorgets (figs. 2, 4, 5, 7, 8, 9); a birdstone fragment (fig. 3) and a highly polished hematite pyramid (fig. 13). The last two items are of special interest. Birdstones, usually associated with Middlesex, Adena and Hopewell (Ritchie 1944, pg. 187, 199, 324) are rare in this area. The Ryders Pond specimen seems to have undergone considerable abuse. Originally it had two protruding eyes, but these were either accidentally damaged or knocked off; all that is left is one "popeye" rising to a fractured-looking surface, and a similar scar on the other side of the bird's head where the eye was. The small perforation suggests that it was used as a lacing hole to tie the head to the rest of the specimen after an accidental decapitation. The bird's beak might also have been damaged at the same time because there are saw marks along both margins, apparently for the removal of the jagged edges caused by the break. This repairing gives the specimen its presently sharply upturned beak.

Rarer than birdstones in this area is the highly polished hematite pyramid, which was carefully labeled "Ryders Pond, Ave. U, Brooklyn, Gravesend, New York, April 9, 1905. Ralph Austin." The pyramid is 4 sided with a flat, rectanguloid base (Fig. 13). The tip and all edges are rounded. This faceted stone seems to be related to the hematite cones and hemispheres of the Adena found in Ohio, Kentucky, Indiana, West Virginia and Pennsylvania (Solecki, 1953, pp. 359, 361; Mayer-Oakes, 1955, p. 153).

Four steatite sherd fragments are also present. One is thick, fairly rough on both surfaces. Another has a smooth interior and coarse tooling scars and grooves on the exterior. The rest are
like those from the Orient Complex to the east, (Ritchie, 1959, p. 62) in that they are smoothly finished inside and out. Also of steatite is a curious object (Cover, Fig. 14), highly polished, with a remarkably well drilled hole running through the length of the stem; the stone is trianguloid in cross section and is decorated with a single incision encircling it. The item was made from a steatite pipe fragment and was probably intended for a pendant.

PROJECTILE POINT TYPE ANALYSIS

Type: Triangular-Equilateral

Form: Equilaterally triangular, fairly thin, with size range from small to large. The edges in most cases are straight-occasionally excurrvate or incurvate. The majority of bases are concave (approx. 55%) with straight bases (43%) next in number. A few specimens have prominent ears or corner barbs, and several are asymmetrical.

Size: Length-5/8" to 1-3/4" (majority between 3/4" and 1-1/4"). Width-approx. same as length dimension.

Sampling: Oriskany (2); Helderberg (83); Onondaga (55); Normanskill (26); chert (14); in determinant flint (16); quartz (102); jasper (10); chalcedony (11); argillite (35); shale (2); misc. (6).

Technique: Fine to medium pressure flaking.

Comments: The triangular point is probably the most problematical chronologically; it has a long range in time, from Archaic to Late Historic Sites. Some of the triangulars at Ryders Pond could be, and most likely are Archaic. Similar types were found at the pre-ceramic Grantville Site in Queens County (Smith 1950 pl. 15). A surface collection from Maspeth, Queens Co. produced 52 triangular specimens, mostly of the small type, which were 30% of the total points found (unpublished data). It should be noted that both the Grantville and Maspeth sites revealed virtually every type of point present in the Ryders Pond collection. The Sweet Meadow Brook Site, (a stratified site) in Rhode Island, had a total of 478 small triangular points. They appeared first in the lower zone close of Stone Bowl Age, (2000 BC), become more numerous in the Middle Lower Zone (start of Ceramic Age-Stage I pottery, (500 AD); and reached a heavy concentration in the Upper Zone-Ceramic Age, Stage 2 & 3 pottery (1000 AD). Large triangulars (1-1/2" or more across the base) were practically all found in the Upper Zone (168 specimens) (Fowler 1956, pg. 13). Triangular points, including eared types, were found at the Robinson Site in New York (Ritchie 1940, p. 32) but no details of stratigraphy were made available. No triangular points of any kind have been recorded on a Lamoka focus site (Ritchie 1940, p. 91).

Type: Triangular-Isosceles

Form: Triangular-base width approximately 1/2 to 2/3 of length. Thickness ranges from about 1/8" to 1/4" with most in the thinner category. Sides are straight or slightly excurrvate on most specimens, with some incurvate. The concave base (64%) predominated, with the straight base (34%) making up the balance. Some eared examples (3) also were present.

Size: Length 3/4" to 1-5/8" (most between 1" and 1-1/4"). Width: 9/16" to 1-1/4".

Sampling: Oriskany (4); Helderberg (26); Onondaga (10); Normanskill (6); chert (17); quartz (59) jasper (14); chalcedony (2); argillite (28); shale (1); misc. (6).

Technique: Fine to medium pressure flaking.

Comments: (See Triangular-Equilateral)-probably some of the Isosceles with curved sides, and especially those with straight base, could qualify for the Archaic period.
Type: Coastal Narrow Side-Notched*

Form: Same in all respects as Coastal Narrow Stemmed except that the stems are notched and often slightly expanding. One of the lateral notches may be pronounced and the other very weak and superficial, or virtually absent. On some specimens, notches were cut horizontally into each side of the primary blade's lower edge, thus creating an indented stem and a base line as wide as the blade's maximum width. There is the same coarse appearance and the same rough finishing of the base with minimal retouching or trimming. Only the quartz points (2 specimens) preserve part of the stones' original rind.

Size: Length-usually 1-1/4" to 1-7/8". Few exceed 2-1/4". Width-1/2" to 7/8".
Sampling: quartz (34); quartzite (2); Normanskill (4); Helderberg (4); argillite (5); Onondaga (5); chalcedony (1).

Technique: Same as Coastal Narrow Stemmed.
Comments: Such points have been described as Lamokoid. The resemblance is more noticeable in specimens made of flinty materials. However, a total Lamoka complex has not been found anywhere in the coastal area, only in the central part of New York State where it seems to be regionally confined.

Type: Coastal Broad Side-Notched

Form: Broad trianguloid or lanceolate with well indented side notches and often with an expanding stem. Some specimens approach the corner-notched type but are thicker and barbs are absent. Bases may be straight, concave or convex. These points, like the narrow type, look coarse and the same general comments apply about the execution of the base. Here again, portions of the pebble rind are on the base (4 specimens), but only on the quartz points.

Size: Length--1-3/4" to 2-1/2". Broken artifacts indicate that some were longer. Width: 1 to 1-3/4"
Sampling: quartz (13); Normanskill (3); Onondaga (1); miscellaneous flint (5); argillite (7).

Technique: Majority seemed to be formed by percussion chipping, with some pressure flaking, especially on the flint specimens. The chipping is somewhat coarse in most cases.

Comments: Small examples seem to be arrow points and the larger and heavier ones javelin or spear points or, in some cases knives. Commonly attributed to Archaic Laurentian Complex in New York State (Ritchie 1940, p. 28 & 64). In Rhode Island at the SweetMeadowbrook site they were in evidence from the Stone Bowl Age to the Stage 3 Pottery Zones (Fowler 1956, Pps. 12, 14, 16)

Type: Thin Side-Notched

Form: Fairly small and thin triangular or lanceolate blade with small side-notches. Base thin and usually convex, but straight and slightly concave bases are present.

Size: Length-1-3/8" to 1-3/4". Breadth-9/16" to 7/8".

Sampling: Onondaga Flint (gray unmottled, Lower Hudson Valley type) (4); Onondaga Flint (bluish-gray mottled, Western New York State type) (2); Normanskill shale flint (1).

Technique: Careless to careful overall flaking but with considerable pressure retouching to thin the edges and base. The notching technique discloses, in most cases, the removal of a single small flake from each side of the blade.

Comments: Appears to be related to Meadowood Side-Notched points. Ritchie (1958, p. 68) "they have associations in several more or less well-known cultures of the Early Woodland Period.

*This type conforms with Twombly Side-notched of Lower Hudson (see NYSAA Bulletin No. 39) and Sylvan Side-notched (see NYSAA Bulletin No. 33).
Type: Coastal Narrow Stemmed*

Form: Short to long narrow trianguloids, often with a rough rudely chipped appearance. Shapes and sizes are not notably uniform. Lateral edges are usually straight but may be incurvate or asymmetrical. Bases vary considerably: some are thin, but most are thick and finished into more of a "U" than a "V" in profile.

Size: Length-1-1/8" to 1-7/8". A few exceed 2-1/4". Width--1/2" to 7/8".

Sampling: quartz (42); quartzite (3); Normanskill (8); Onondaga (8); Helderberg (2); shale (2); argillite (4).

Technique: Flaking-a few points are triangular in cross section and were made from prismoidal splinters of stone. The crude execution of the quartz points is attributable in large measure to the uneven fracture planes of the material. Some quartz artifacts (11 specimens) preserve part of the pebble rind at an angle to the base, while others appear as though the rind was flaked off without any further retouching.

Comments: Clearly related to the Coastal Narrow Side-Notched. Many of the points show a morphological similarity to the stemmed Lamoka points of central New York State.

Type: Coastal Broad Stemmed

Form: Broad, trianguloid or lanceolate blade, usually with well defined shoulders. The sides of the stem may be parallel or taper to a straight or convex base line. Specimens of quartz are particularly thick and heavy.

Size: Length--1-3/8" to 2-3/4" and larger based on fragments. Width-1" to 1-3/8".

Sampling: quartz (8); Helderberg (4); Onondaga (6); Normanskill (6); miscellaneous flint (1); argillite (7).

Technique: Similar to Coastal Broad Side-Notched.

Comments: Related to the Laurentian Complex, ranging from Late Archaic to Early Woodland. In Rhode Island at the Sweet-Meadow Brook Site, they were present in the Stone Bowl area and Early Ceramic (Stage 1) layer. (Fowler 1956, pp. 12 and 14)

Type: Bifurcated Side-Notched**

Form: Small, trianguloid with three notches, two placed on the sides and one on the base. Except for the basal notch, the type resembles, and intergrades into the corner notched or side-notched categories.

Sizes: Length-1-3/16" to 1-1/2". Width-7/8" to 1-5/16".

Sampling: quartz (3).

Technique: The three specimens show more flaking on one side than the other which is flat, retaining in two instances a portion of the surface of the primary flake.

Comments: Only two specimens were found at the Robinson site in New York State (Ritchie, 1940, p. 29). However, the type conforms to examples recorded from surface sites, presumably of the Brewerton Focus, in Central and Western New York and from certain early Coastal Aspect stations about New York City.

Type: Eared-Notched

Form: Trianguloid in blade with two protruding flanges or ears below fairly shallow side-notches. Ryders Pond produced only two specimens. One was made from a thin flake of Helderberg flint and has a concave base. The other was fashioned from a somewhat


**This type would fall within the early Archaic as proved on Staten Island. See NYSAA Bulletin No. 52.
thick piece of Normanskill flint and has a smoothly rubbed base. The form grades into, and may properly be regarded as, a subtype of the side-notched series.

**Size:** The shortest is 1-3/16" in length by 9/16" in width across the shoulders. The other specimen is fragmentary with estimated length of 1-1/2 and width of 11/16".

**Sampling:** Helderberg (1); Normanskill (1).

**Comments:** In New York State, at Robinson Site, 92 well defined examples or 8.25% of total points were cataloged. (Ritchie, 1940, p. 28). Only 3 or .6 of one percent were noted at the Oberlander Site (Ritchie, 1940, P. 66). This type was absent in Lamoka. In Rhode Island this type is attributed to the close of the Stone Bowl Age (Fowler 1956, p. 12, fig. 4:37).

**Type: Corner Notched**

**Form:** Trianguloid with straight to convex sides and a short stem formed by diagonally notching each basal corner. The base line, which is usually very thin, may be straight, concave or convex.

**Size:** Length-7/8" to an estimated 1-5/8" based on some large fragments. Width 7/8" to 1-1/8".

**Sampling:** Jasper (11); quartz (5); Helderberg (2); Normanskill (4); Onondaga (2); argillite (1); miscellaneous (3).

**Technique:** The jasper and flint specimens were worked from thin flakes. Most have one surface flatter than the other. Bifacial chipping predominates, but on some the underside of the flake was not as carefully retouched. Two items retain the curve of the flake and were not retouched at all, except for very fine marginal pressure chipping to trim the outline. Those of quartz are somewhat thicker. Since the barbs and thin stems were fragile, many of the artifacts are fragmentary.

**Comments:** Similar types, comprising a minority, are found on Laurentian sites such as Robinson and Oberlander in New York State (Ritchie, 1940, pp. 29-66). They also appeared at the Sweet-Meadow site in Rhode Island, where they were attributed to the stages 2 and 3 Ceramic horizons (Fowler, 1956, p.16).

**Type: Vosburg Corner Notched**

**Form:** A variety or subtype of Corner Notched with a short shank. The base in most cases is straight.

**Size:** Length-1-1/2" to 2". Width--7/8" to 1-3/16"

**Sampling:** quartz (2); Normanskill (1); Onondaga (1), miscellaneous (1).

**Comments:** Points similar to Vosburg type were found at Green Point Site in Rhode Island (Fowler, 1956, pp. 68-69). One specimen (fig. 2:4) is illustrated by Fowler as Early Archaic, and others (fig. 3:36-39) as Stone Bowl Age Material.

**Type: Fishtail Point**

**Form:** The classical form (Orient Fishtail Point) is long and slender with a graceful incurving sweep blending into a flaring "fishtail" stem, usually with a concave, and less commonly, a straight base. According to Ritchie (1959, p. 32), a variant, possibly an intermediate form, chiefly found in the middle and lower Hudson Valley, has a proportionally broader blade and a nearly straight or straight base.

**Size:** Smallest-15/16" x 9/16". Largest-2-3/16" x 7/8". **Sampling:** quartz (7); Onondaga (2); shale (1).

**Comments:** The "Fishtail" is perhaps the most interesting of all the points. This type has been reported in small numbers from Archaic components, specifically from the Brewerton Focus, Laurentian Aspect, in upstate New York (Ritchie 1940, pp. 29, 66), and
and recently, from a site near Ossining, New York, which appears to be coeval with the Lamoka horizon (Brennan, 1956, p. 11). They are best known, however, from the Orient culture of far eastern Long Island where they are more numerous. Most have the indented base, but there are some, like the Alpine Terrace specimen, with straight bases. The Orient manifestation is believed to be Late Archaic and on the very threshold of Early Woodland. Interestingly, fishtails in New Jersey were also being made, as in the case of Orient, when steatite vessels were still being made, and later, when the first clay pots were produced. In the greater New York City area, they have been found, as a minority form, at Grantville, an Archaic site in College Point, Queens County, and on sites with early ceramic components of the Windsor Aspect: the Throgs Neck, Schurz and Pelham Boulder stations (Bronx County) and at the Matinecock Point (Nassau County, Bay Terrace, and Tallmans Island (Queens County) sites. Distribution is eastern and southern New York, particularly the middle and lower Hudson Valley and Long Island. Representation is light in central New York, southern New England and northeastern New York. (Ritchie, 1959, p. 32). In New York State it is diagnostic of Orient focus in eastern Long Island. Two specimens are from Robinson site (Ritchie, 1940 p. 29).

Type: Lozenge

*Form:* Quadrilateral, resembling a diamond or rhomboid. The shoulders are angular or rounded and the section below the shoulder-bend is approximately 1/2 the length of the artifact. The basal tip is sometimes truncated.


*Technique:* Flaking-coarse workmanship, largely by percussion.

*Comments:* The type also occurs in other sections of the country. Ford, Phillips and Haag (1955, p. 133) regard this small point as a significant index artifact in the Lower Mississippi Valley where the time range seems to be from Poverty Point to the Plaquemine Period. Skinner (1919, pp. 64, 70) reported the type and its related lozenge form as being "abundant at the greater depths, but disappearing as the topmost layer was reached" in a shell-heap at the Throgs Neck site, Bronx County. Cross (1941, pp. 122-127, 210-211) reports that the lozenge-shaped point is also found in the Red Valley Focus of New Jersey, associated with the bannerstone, gouge, knobbed adze and other artifacts. Fowler (1956, p. 12, 14) assigns it to close of Stone Bowl, start of Ceramic Age (Stage 1).

Type: Semi Lozenge-shaped points

*Form:* Elongated triangular blade with angular or rounded shoulders curving downward to an expanding stem. Resembles the Susquehanna Broad Point.

*Size:* Length-1-1/4" and 1-5/8". Width-3/4" and 1".

*Sampling:* Onondaga (2).

*Technique:* The removal of broad to fine, flattened flakes from both surfaces, and careful marginal retouching.

*Comments:* Its temporal beginnings are unknown and it may not belong to the Laurentian tradition. A single "somewhat doubtful" example was found at Robinson Site (Ritchie 1940, p. 29). Six specimens or 1.3% of total; however, were also found at Oberlander; all were made from a gray chert except one which was of rhyolite, the nearest known source of which is southeastern Pa. (Ritchie, 1940, p. 66). In Rhode Island at the Sweet-Meadow Brook site, they are placed at the close of Stone Bowl Age (Fowler 1956, p. 12).
Type: Pointed Stem

**Form:** Isosceles in blade with the stems sides tapering to a point below rudimentary to more carefully executed shoulders. The basal tip is angularly pointed or slightly rounded. **Size:** There are narrow and broad types: Narrow type: Length-1-11/16 to 2-3/8". Width-11/16 to 7/8". Broad Type-Length 2-1/4” to 2-5/8". Width 7/8 to 1-1/4".

**Sampling:** quartz (29), argillite (8), shale (1).

**Technique:** Flaking-- generally crude to fair. Some specimens have two pronounced shoulders whereas others have only one, with the opposite side asymmetrically rounded, or with an incipient shoulder.

**Comments:** (See Lobate stemmed).

Type: Lobate-Stemmed

**Form:** Short to long blades, usually with straight or convex sides; the stem tapers to an ovate base. Shoulders are customarily evident.

**Size:** Lengths-1-1/4" to 2-3/4". Width-3/4" to 1-1/4".

**Sampling:** quartz (14); flints, including Onondaga and Helderberg (5); chalcedony (2); quartzite (1); argillite (1).

**Technique:** Flaking--generally crude to fair; good workmanship depending on the type of stone. Most of the quartz points are fairly crude, but some of the better grade stones, including the flinty ones, indicate pressure flaking along the edges and reasonable care in shaping the lobate stem.

**Comments:** Ritchie (1959, p. 33) suspects an Early Woodland provenience. As he states, "Available data suggests its derivation from the Ohio Valley, whence it entered New York through the Allegheny Valley with other traits of the Adena tradition. It seems to have reached eastern New York via the Mohawk Valley and, in the Hudson Valley and coastal New York, to have overlapped with the period when the Orient Fishtail type reached its climax." Reported by Solecki (1953, p. 368) from an Adena Mound at Natrium, West Virginia by Holland, (1955, p. 170 and plate 29a) in Virginia, and by Fowler for Sweet-Meadow Brook, Mass. (1. 14) start of Ceramic Age (State 1 pottery).

Type: Steubenville Lanceolate

**Form:** Crude lanceolate usually with a base which is square, but sometimes concave or convex. As pointed out by Dragoo (1959, p. 198), "The lanceolate type is not as well defined as the stemmed type; several appear to be weakly shouldered variety of the stemmed form. Most of the lanceolate are crude and have the general appearance of blanks rather than of finished tools." Nevertheless they do seem to be a deliberate form.

**Size:** Same as Steubenville Stemmed.

**Sampling:** argillite (11); yellow jasper (1); quartz (2).

**Technique:** Generally broad, flat flaking. Some of the Steubenville Stemmed type might have been made by modifying the base to form a stem.

**Comments:** (See Steubenville Stemmed).

Type: Steubenville Stemmed

**Form:** Mostly long wide blades, usually lanceolate in outline. The stem's sides are usually straight with a slight instep, or are parallel-sided to form a broad square base. The basal line is sometimes concave with an occasional suggestion of an ear in one corner.

**Size:** Average 2-1/2" to 3" with the maximum breadth ranging from 1-1/8" to 1-3/8"; The smallest is 1-3/4" long by a 7/8" maximum width.

**Sampling:** argillite (15); yellow jasper (1); Lower Hudson Helderberg flint (1); indurated shale (4).
Technique: Flaking--the argillaceous specimens look exceptionally crude. The technique involved the removal of broad flat flakes. The jasper and flint examples also show broad flaking, but with rather deep conchoidal scars along the edges accompanied by some smaller chipping. No basal or edge grinding was noted.

Comments: Some broad square based points and blades, suggestive of the Steubenville Stemmed, Steubenville Lanceolate and Ovate Stem points were reported from a Late Adena Mound at Natrium by Solecki (1953 pp. 366-368).

Type: Pentagonal Points

Form: A point with five sides, one of which forms a straight or concave base. Shoulders are angular in most cases.

Size: Length-1-3/8" to 2", Width-7/8" to 1-3/8". Sampling: quartz(2); argillite (4).

Comments: This type was undoubtedly shared by more than one culture. Those of argillite suggest that they may have been reclopped and reshaped from basal fragments of the broad Steubenville Lanceolate and stemmed types. One specimen preserves a typical Steubenville Stemmed concave base with an ear in one corner (Pl. 5. fig. 17). Five specimens are noted at the Robinson site in New York State. They are also known to occur with the semi-lozenge form on the Schermerhorn Site near Schenectady and on several components of the Point Peninsula Focus in New York (Ritchie 1940, pp. 30-31).

Type: Simple Stem Points

Form: Narrow lanceolate, or long triangular blades, all of argillite, with simple, and rather improvised looking stems. A few seem to merge into a category of narrow lanceolate blanks. Nearly all traces of workmanship have been obliterated by deep weathering, but the removal of large flat flakes was obviously the flaking technique used. Size: Lengths-1-5/8" to an estimated 2-3/4".

Sampling: argillite (15).

Comments: Unknown distribution and chronology.

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<th>TABLE 2. Non-Projectile Inventory</th>
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<tr>
<td>Chipped Stone</td>
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<td>Scrapers</td>
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<td>Type 3-Round End</td>
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<td>Type 5-Keeled</td>
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<td>Type 6-Thumbnail</td>
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Part II and Bibliography to appear in July, 1972, issue.
THE HAMMERSTONE ROCKSHELTER

Surveying along a series of Onondaga (Devonian) limestone outcrops running slightly east of north-south in the Coxsackie quadrangle, Greene County, New York, we found another small but relatively productive rockshelter. We named this the Hammerstone Rock shelter (Cox-35) for a reason to be mentioned later.

As the goose flies, the site lies approximately 5 mi. both west of the Hudson River and north of Catskill and about .5 mi. from Hollister Lake to the north and Greens Lake to the south. The outcrops of limestone are generally in 4 parallel ridges totaling .25 mi. in width, and seldom more than 20 ft. in height. They form continuous or broken-block ridges with their faces perpendicular to the mixed deciduous forest floor, and show little or no talus slope. Eastern Onondaga flint was found in nodular layers throughout all the escarpments. Unfortunately, despite the seemingly excellent conditions there were extremely few suggestions of overhangs that could be used as rockshelters.

The overhang that we joyously discovered after a day of dodging deer hunters and walking along blank walls was a small one, but immediately showed occupation by the tremendous amount of flint debris on the floor and on the surface of a small knoll directly before the opening.

The east-facing overhang was 4.5-5 ft, high, projecting out from .5 ft. at the south end over the approximately 25 ft. long living floor. The back wall and ceiling had regular surfaces. The living area was flat, about 3 ft. above the surrounding woodlands, but extended only 4.5-5 ft, from the back wall out to a series of weathered limestone blocks which had broken from the overhang. In the five 5-ft. squares that we excavated, we found Stratum I to be a 7-10 in, thick dark-brown humic soil heavily interbedded with flint debris, both from native chipping activity and natural flaking away from the limestone through weathering. We estimate that approximately 1/3 of the bulk of Stratum I was composed of flint pieces, making troweling very difficult since most flakes had to be picked up and handled individually.

We were astounded to find 60 hammerstones, 58 in Stratum I. These ranged from 1 in. long pebbles to 6 in, long cobbles. As one might surmise from the quantity of flint debitage and number (unbelievable as it may seem) of hammerstones the Hammerstone Rockshelter was basically a workshop station that produced artifacts ranging from the original quarried flint blocks through all stages of manufacture from blades, through blanks, to points. Separating the bifacial objects, most of which were of the eastern Onondaga flint found in the shelter walls, into categories was obviously difficult because of gradations. However, we decided upon rough divisions which showed 10 cores, 27 bifaces, 13 point or knife preforms, 9 point or knife blanks (Pl. 1, figs. 7, 8, 10, 11), and 5 knives (P1. 1, figs. 9, 12-14, 17). Since all the above artifacts were equally spread throughout the stratum, we saw no value in attempting to separate them into vertical zones. Surprisingly, 4 small Normanskill flint cores were found in Stratum I, though few chips of this material were uncovered.

The few points found in Stratum I, however, show a definite vertical stratigraphy that corresponds to Funk's chronological outline for the Hudson Valley (Funk, n.d.). At 3 in. we uncovered a Greene Point (fig. 1) of the late Middle Woodland period, dating to 400-700 A.D. (Funk, personal communication). At 4 in. we found an untyped corner notched expanded stem point (fig. 2) which appears on some Early Woodland sites (Ritchie, 1965, p. 222) and might be related to similar points, again possibly Early Woodland, which we have recently discovered in abundance at the Satisfaction Site on Coxsackie Creek (Weinman and Weinman, n.d.). Along with these 2 points we found a finely chipped point tip and 6 crude side scrapers (fig. 15) based on flint pieces obviously knocked from the shelter wall as
indicated by the flat basal surfaces which occurred where the flint veins intersected the limestone. These may have been used as dart shaft planers or other bone or wood working tools.

Near the base of this initial soil layer at 7 and 8 in. were 2 Susquehanna Broad points (figs. 3, 4) of the Transitional Stage (approx. 1000 B.C.) (Ritchie, 1965, pp. 149-163). Below these, resting on Stratum II at 10 in. was a Wading River point (fig. 5), known to occur with stemmed points of the Sylvan Lake Phase (approx. 2200 B.C.) in the Hudson Valley (Funk, 1965).

Within Stratum I, fragments of deer bone, a raccoon mandible fragment, and a beaver humerus were recovered, showing that the shelter had been used for limited living purposes. A piece of fresh water clam shell was found at 4 in., indicating that some of the Early or Middle Woodland folk were traveling at least a half mile to either Greens or Hollister Lakes during warm weather to collect fresh water clams. We found this to be suggested at the similarly situated Hound Dog Rockshelter (Weinman and Weinman, 1969a) where we also found fresh water clam shell.

Stratum II was a dark red brown color, generally 3-5 in. thick. Aside from flint pieces that obviously had fallen from the shelter wall, there were few flint chips. We did, however, recover a Vosburg point, apparently representing the Vosburg complex of the Laurentian Tradition (Ritchie, 1965, pp. 83-84) at 12 in., 2 in. into Stratum II (fig. 6). This complex dates to about 2700-2400 B.C. (Funk, 1965; n.d.). In addition, we found 2 hammerstones, a side scraper (fig. 16) similar to those found in Stratum I, and 2 blade fragments. A few pieces of deer bone indicated at least a limited stay by Indian hunters.

As we have found in other nearby small, seemingly inadequate rockshelters, Moonshine (Weinman and Weinman, 1969b) Hound Dog (Weinman and Weinman, 1969a) and Himmer (Weinman and Weinman, 1970), careful excavations have revealed limited, but informative stratigraphic sequences which have corresponded with Funk's sequence for the Hudson Valley.
(Funk, 1965; n.d.). Of particular note in the case of the Hammerstone Rockshelter is the discovery of the Vosburg point in Stratum II below the Wading River point at the junction of Strata I and II, and the superposition of the 2 Susquehannas, a sequence that had been in some question (Ritchie, 1958) up to a few years ago for the Hudson Valley.

As with the Moonshine and Hound Dog Rockshelters, we suspect that a major reason for staying under rather undesirable overhangs was the abundance of Eastern Onondaga flint within the bedrock. The high quantity of chipping debris and low percentage of finished points of that flint indicate that points may not have been finished at these stations, whereas point blanks were probably prepared in some number. The data from the Baldwin Rockshelter (Weinman and Weinman, 1967) near Flint Mine Hill, a major aboriginal flint quarry, also conforms with this hypothesis. At the Hammerstone Site, all points except 1 Susquehanna and the Vosburg were of Normanskill flint, which occurs in outcrops some miles away. Even these 2 Eastern Onondaga flint points show a banding which does not appear in the flint at the shelter. The fact that the point blanks were probably carried away from the site through the wanderings of individual hunters or small bands suggests very short term stays at this and other "uninhabitable" stations.

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1967 The Baldwin Rockshelter. NYSAA, Bull. 41. Ossining, N.Y.
1969a The Hound Dog Rockshelter. NYSAA, Bull. 47. Ossining, N.Y.
1969b The Moonshine Rockshelter. NYSAA, Bull. 46. Ossining, N.Y.
n.d. The Satisfaction Site.

Minutes of the 55th Annual Meeting
NEW YORK STATE ARCHEOLOGICAL ASSOCIATION
State University of New York At Binghamton
Binghamton, New York
April 16, 17, 18, 1971

Executive Committee Meeting

A meeting of the Executive committee was held on Friday, April 16. President Michael J. Ripton called the meeting to order at 8:35 p.m. The following members including State officers, Chapter presidents and trustees were present:

Michael J. Ripton (Morgan Chapter) *Carolyn Weatherwax (Auringer-Seelye)
Theodore Whitney (Chenango Chapter) *Dorothy Taylor (Auringer-Seelye)
William F. Ehlers (Orange County Chapter) Stanford Gibson (Chenango Chapter)
Nannette J. Hayes (Morgan Chapter) *Monte Bennett (Chenango Chapter)
Louis A. Brennan (Metropolitan Chapter) Henry Wemple (Chenango Chapter)

*Alternates
1. Roll call was taken.

2. Minutes of the last meeting were previously distributed. Motion was made by Thomas Elliott to accept the minutes as printed. Motion seconded by William Vernooy. Motion carried.

3. President Ripton's opening remarks made mention of the increasing volume of Association business, the publications program undertaken and the program to sponsor scholarship students at the annual meetings. Four chapters are paying all expenses for students and it is hoped that each of the chapters will participate in this program next year.

Mr. Ripton reported that the Internal Revenue Department had made official recognition of the Association as a professional, non-profit organization and as a result of careful screening had given the NYSAA a tax exempt status under federal section 501(C3),

4. **Public Relations** - Dr. Gladys Haase reported eight news releases had been prepared and distributed statewide. Many papers are using the material. She had hoped to prepare a news release each month but the lack of material prevented this. Dr. Haase reported an expenditure of $46.60 for her committee.

5. **Chapters and Membership** - William Vernooy reported on the progress of his committee by distributing a report of committee activities. Promotional material for the membership drive, including new brochures, were distributed to all chapters present. Chairman Vernooy reported the campaign had been postponed until 1971, due to the financial recession in the nation.

6. **New York Indian** - This committee co-chaired by Dorothy Taylor and Charles Pierce reported that a list of colleges in New York State had been compiled where Indians could attend with scholarship grants-in-aid. The material was printed by the state Education Department through the efforts of Mrs. Taylor, who reported that the information will be made available to reservation Indian high school graduates in June. Total expense for the committee was $10.00.

7. **Legislative Committee** - Charles Merritt, Chairman. The function of this committee is to investigate state legislation concerning archeological matters. The committee studied material from federal sources and also other states. Conference was arranged with Mr. Wilcox of the State Department of Education and others to discuss current proposed legislation in the New York State Assembly and Senate relating to changes in the existing antiquity laws.

The Cook - Stafford Bill was discussed at length and the following motion was made:

71-1 RESOLVED, That the New York State Archeological Association hereby endorses the Cook-Stafford Bill, 4210A in the Senate and 4843A in the Assembly, and opposes Bill
3284A, and that the Association officially inform the Legislature of its conclusions. Motion by Louis Brennan. Second Dolores Lalock. 32 in favor, 1 against, 2 abstain - Mr. Huey and Mr. Gillette. Motion carried.

Mrs. Lalock asked that Dr. White's name be placed on the list to serve on the proposed State Antiquities Board. Mr. Ripton suggested that we hold off action until the Board established criteria for membership and all professionals in the state be contacted.

8. Chapters - Vice President Whitney reported visitations to all Chapters but two. Chapter problems were discussed with Chapter officers and members and all Chapters expressed practically the same problems. Follow-up on Chapter concerns is planned.

9. Publications - Dolores Elliott, Chairman, reported three Bulletins, one Occasional Paper, and two editorials had been printed this year. A publication booth had been set up in the meeting room and order forms were available for all publications.

Editor Brennan discussed The Bulletin's future plans, and some of the pitfalls encountered. Rising costs are the major concern at this point. Brennan reported that he spent $14.00 more than the authorized $1,500, for The Bulletin last year. Various bids are being received from printers and all proposals so far exceed the present cost of printing by Braun-Brumfield.

It was suggested that Braun-Brumfield be retained until the publications committee can further investigate the prices of other publishers. It was also suggested that other sources of income be considered.

71-2 RESOLVED, That the New York State Archeological Association appropriate the sum of One Thousand Eight Hundred and Thirty-Six Dollars ($1,836) for the expenses of publishing three issues of The Bulletin for the coming year. Motion made by Mr. Whitney, seconded by Dr. Haase. Motion carried, 1 abstaining - Mrs. Hayes.

Discussion continued on other publications of the Association including the manuscript of Dr. Peter Pratt. Mr. Wemple reported that he had tried unsuccessfully to raise additional funds to publish Pratts' manuscript but that after writing the Smithsonian, the Wenner-Gren Foundation, and our congressional representatives in Washington, he had run out of contacts. Mrs. Hayes suggested that we concentrate on The Bulletin.

71-3 RESOLVED, That the New York State Archeological Association regretfully return the Pratt manuscript to Dr. Pratt with a letter from the president explaining our position and that the money ($1,600) earmarked for the Pratt work be released to the publication's fund for another publication.

Motion made by Mr. Pierce, seconded by Mrs. Taylor. Carried - 1 abstaining - Mr. Dart.

Mr. Wemple was instructed to return the manuscript to Dr. Pratt after the president's letter was written and sent.

71-4 RESOLVED, That the New York State Archeological Association hereby reappoints Louis A, Brennan as editor of The Bulletin for another one-year term and recognizes his eleven (11) years service to the publications program of the Association.

Motion by Mrs. Elliott, seconded by Mr. Pierce, carried.

10. Report of Chapters - President Ripton asked for a report from each Chapter. All Chapters except the Mid-Hudson Chapter reported various projects underway. Published Chapter Annual Reports were distributed to all presidents.

NEW BUSINESS

11. Budget - President Ripton suggested a budget increase of 10% over last year's budget with the additions of $20 to the Legislative committee and $20 to the Awards committee.

71-5 RESOLVED, That the New York State Archeological Association authorize the elected officers of the Association to spend up to Nine Hundred and Twenty-Seven Dollars and Thirty Cents ($927.30) for the administrative needs of the Association.

Motion by Mr. Veres, seconded by Dr. Haase, carried.

71-6 RESOLVED, That the New York State Archeological Association authorize the Treasurer to withdraw Two Hundred and Twenty-Five Dollars ($225) from the small interest account to pay the expenses of the membership drive.

Motion by Mr. Veres, seconded by Mr. Pierce, carried.
12. President Ripton discussed the need to look for outside funds to operate the Association in the 1970's. He encouraged Chapter Presidents to prepare research projects and accompanying budgets so that when outside funds become available, the Association will be able to move in a hurry to secure them. Cited were the N.Y. State Council on the Arts, the Department of Education and others.

71-7 RESOLVED, That the New York State Archeological Association prepare a master plan of Chapter research projects to be presented to outside funding organizations for possible future grants-in-aid.

Motion by Mr. Brennan, seconded by Mr. Wemple, carried.

13. President Ripton asked that the Executive Committee establish a policy for the distribution of the Association's membership list. A discussion followed.

71-8 RESOLVED, That the New York State Archeological Association direct the President to answer all inquiries concerning the use of the membership list and that he release the list only to reputable publishers of archeological or anthropological material in the interest of the membership. A fee will be charged where appropriate.

Motion by Mr. Brennan, seconded by Mr. Veres, carried.

14. A discussion followed on the Association's proposed site survey, collections survey and, registration of sites in the State as suggested by Vice President Ted Whitney. Mr. Whitney spoke briefly on all significant sites and collections. Mr. Ripton will appoint a committee to set up the survey and possibly fund the project through the New York State Bicentennial Commission.

15. Budget - Mr. Dart recommended that sustaining membership be increased to $20.00. It was suggested a committee be appointed to study the possibility of changing membership classifications. Most present sustaining memberships are retained by institutions. Mr. Dart was appointed to study this proposal further.

16. 71-9 RESOLVED, That the New York State Archeological Association sponsor events other than the Annual Meeting during the year, especially workshops and certain summer field trips and regional meetings.

Motion made by Mrs. Gillette, seconded by Mr. Wemple. Carried.

Mr. Alfred Dart said that the Incorporated Long Island Chapter was considering a field trip to their site at the Flint Mines near Coxsackie, New York. Their board would soon invite the whole Association to the proposed field trip.

17. 1972 Annual Meeting - The Van Epps - Hartley Chapter offered to host the 1972 NYSAA annual meeting with Albany as the headquarters. President Ripton suggested final decision be postponed later date.

18. A discussion of proposed federal legislation was introduced by Mr. Brennan.

71-10 RESOLVED, That the New York State Archeological Association to direct the secretary to write our Congressmen asking them to endorse HR 6257 and S1245 to amend Public Law 86-523 of June 27, 1960.

Motion by Mr. Brennan, second by Mr. Wemple, carried.

19. Mrs. Hayes suggested that a list be sent to the state secretary of Rochester Museum staff who handled the NYSAA publications program so well last year, so that these people could be thanked officially.

The meeting was adjourned at 11:50 pm.

ANNUAL BUSINESS MEETING

1. The meeting began on Saturday, April 17, 8:40 pm EST. A quorum was present at that time.

2. President Ripton opened the meeting with a review of the Executive Committee meeting, explaining the tax exempt status of the Association and thanking the officers for their past cooperation.

3. Minutes of the Executive Committee meeting were read by the secretary. Corrections were made and minutes were approved.

4. The Treasurer's report was read by Mr. Ripton in the absence of Mrs. Hayes.
5. Membership

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Memberships</th>
<th>Total Number of Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>407</td>
<td>513</td>
</tr>
<tr>
<td>1971</td>
<td>532</td>
<td>667</td>
</tr>
</tbody>
</table>

6. President Ripton reported on the October Executive Committee meeting in Binghamton mentioning that all persons attending did so at their own expense and no expenses were incurred to the Association.

7. Membership drive - Bill Vernooy, Chairman, reported that material had been distributed to conduct the drive, and instructions had been given out. Mr. Vernooy impressed on the members that the strength of the drive would depend on the Chapter captains chosen to head the campaign in each Chapter.

8. Nominating Committee - Kingston Larner reported that a strong slate of officers were in office, and he had wished to retain them. The Vice President, Secretary and Treasurer asked to be relieved. Dr. Kraus and Mr. Pierce were nominated for Vice President, the secretary was renominated and Mrs. Rose Barber was nominated Treasurer. Mr. Ripton, Mr. Ehlers and Mr. Brennan were incumbents. Dr. Larner pointed out that each Chapter secretary was a member of the nominating committee and each Chapter should participate.

9. Awards and Fellowships - R. Arthur Johnson, Chairman, reported the committee met on Friday and reviewed various awards and consideration was given to changing some categories. Mr. Johnson made it clear that the committee tried to stay within the letter of the law to make awards meaningful. The fellowship committee recommended to include a phrase in the category of Certificate of Merit. The phrase reads "Significant field work."

10. Resolution: 71-11

RESOLVED, That the New York State Archeological Association expresses its sincere appreciation to Dean Veres, Program Chairman, and Miss Kathy Rapp and the local arrangements committee and to the Triple Cities Chapter for the meritorious efforts in preparing for and executing all the final details necessary for the successful 55th annual meeting of the Association.

Motion made by Dr. Larner, seconded by Mr. Dart, carried.

11. Tellers, Lilita Bergs and Dr. Cottral announced the results of the election: President - Michael J. Ripton; Vice President - Charles Pierce; Secretary - William F. Ehlers; Treasurer - Rose Barber; E.S.A.F. Representative - Louis A Brennan.

12. Dr. Larner made a motion for adjournment. Motion carried and the meeting was adjourned at 9:25 a.m. E.S.T.

Respectfully submitted,
William E. Ehlers
Secretary

Book Note

The St. Albans Site, Kanawha County, West Virginia, Second Preliminary Report, by Bettye Broyles. West Virginia Geological and Economic Survey. Morgantown. $2. The first report on the deeply stratified St. Albans site, by reason of its ordered sequence dating from 10,000 years ago the finest archaeological site in the United States, was published in 1966 as No. 19 of the West Virginia Archeologist and is now in very short supply. Since that publication additional work has been done and the site is now recognized as the index site for the Eastern Archaic. Its relevance to New York has been demonstrated by the discovery on Staten Island of Early Archaic points of St. Albans types as reported by Ritchie in The Bulletin, July, 1971. The second St. Albans report, which covers all work done to date, assumes an importance second only to Coe's "The Formative Cultures of the Carolina Piedmont" and belongs in that place in the library of every working student of Eastern archaeology.

L.A.B.