



# ANNUAL REPORT

of the Salt Pond Areas Bird Sanctuaries, Inc.

Falmouth, Massachusetts

June 1979



**Robert Livingstone**  
44 Nobska Rd.  
Woods Hole, MA 02543-1420



*Photograph courtesy of Bruce Chalmers*

## Salt Pond Areas Bird Sanctuaries, Inc.

Founded: 1961

Incorporated: 1962

Office: 881 Palmer Avenue  
Falmouth, Massachusetts 02540

Telephone: (617) 548-0711 or 548-0703

Salt Pond Areas Bird Sanctuaries, Inc. is a non-profit privately administered corporation dedicated to conserving the natural resources of the Town of Falmouth, Massachusetts.

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## Table of Contents

President's Report	2
1978 Financial Report	2
Officers and Board of Trustees	2
Small Indian Midden in Quissett — K.O. Emery	3
The Knob Report	5
Future Agricultural Studies?	6
Land Acquisitions Listing	6
Wildlife Committee Report	7
Science and Education Committee Report	8
Anaerobic Microbiology of Salt Pond — Taylor, Molongoski and Ljungdahl	8
How Deep is "Bottomless"? — Kubersky	9
Why SPABSI Should Acquire Bourne Farm	10
Why We Care	10
Acquisition Map, Salt Pond and Oyster Pond	10
Acquisition Map, Sippewissett Marshes	11



## Small Indian Midden in Quissett

During early 1978 an access road for construction of a condominium at Treetops in Quissett (between Falmouth and Woods Hole, Mass.) was cut through a small area that contained mollusk shells and other midden material. A bulldozer pushed the top soil along with nearly all the midden into a pile about 50 feet down-slope on the road, where I first saw the material. The volume of midden was estimated to be no more than two cubic yards. Fifteen auger holes off to one side of the road revealed about 5 inches of black soil atop 2 to 10 inches of undisturbed wind-blown sand in turn overlying sandy glacial till. Midden shells were in only a few of the test holes, concentrated near the bottom of the black soil. On the opposite side of the road shells were not present, and the glacial till had been exposed by the bulldozer. No evidence of an original mound remained,

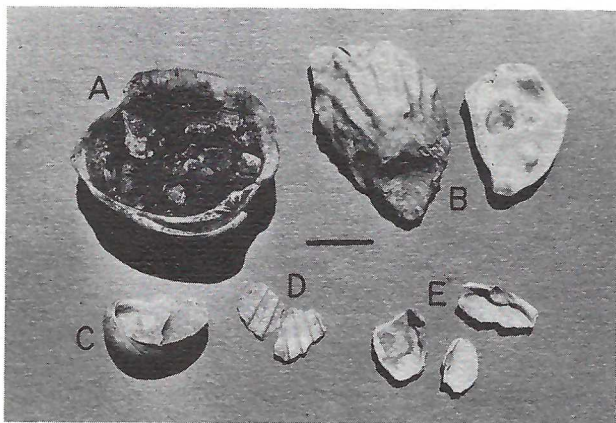


Figure 1: Kinds of mollusk shells in the midden: A. hard clam, or quahog (*Mercenaria mercenaris*); B. oyster (*Ostrea virginica*); C. slipper shell (*Crepidula fornicata*); D. bay scallop (*Aequipecten irradians*); E. soft clam (*Mya arenaria*).

in fact, during walks through the area prior to construction I had seen no mound. Several times after rains dur-

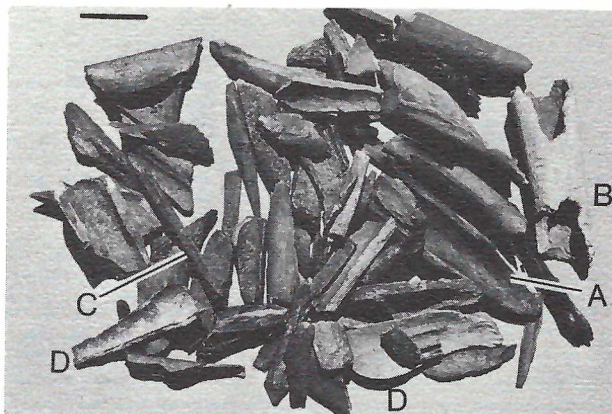


Figure 2: Long bones mostly of deer (*Odocoileus virginianus*) perhaps split for marrow but without distinctive markings of splitting by man, according to Dennis Stanford (Smithsonian Institution). One piece (A) was shaped into a sort of chisel (for opening mollusks?) and exhibits wear near the point. Another piece (B) has a hole that may have been drilled. C is a piece of baculum (penis bone) or a small adult dog (*Canis sp.*). D are bones of a diving duck or scaup (*Aythya sp.*).

ing the next months I revisited the area and the pile of top soil in order to examine and collect midden. In late April 1979 the pile was removed, spread on a slope about 200 yards distant, and planted with grass. The midden originally had been deposited about 33 feet above the level of Oyster Pond and 100 yards northwest of the northernmost point of the pond (at Lat. 41°32' 50"N; Long. 70°38'33"W). The site is in a broad fairly flat-floored valley (the axis of an elongate glacial kettle) that continues into the pond.

### Materials in the Pond

Although the midden was small and had been thoroughly disturbed and moved by a bulldozer, the materials that were in it are interesting in connection with the probable date of their disposition.

Most abundant by far are mollusk shells, of which hard clam-quahog (Fig. 1-A) comprise more than 90%, a few shells still retaining their purple color near the

possible to make a fair offer on the Farm this year.

There is a thought for all of you who find no hope of Spring in January. The great horned owl, which has nested in our Cumloden Swamp, according to *Birds of America*, lays its eggs as early as the last week in January. "It is by no means uncommon to find a great horned owl stolidly incubating under a thick blanket of snow." So next year, forget how cold it is, and walk into Cumloden and look for the owl.

*Ermine Lovell*

Ermine Lovell

For those members who want to see the minutes from last year's annual meeting or the agenda for this year's meeting, please call or write our office. Copies of these minutes and agenda will also be available at the Annual Meeting.

## Salt Pond Marsh Day ~1979

This year Salt Pond Marsh Day will be observed on Monday, June 25 with a presentation on, "Salt Marshes — Falmouth's Greatest Natural Resource." The lecture will be given by the internationally well known ecologist, Dr. George M. Woodwell, Director of the Ecosystem Center of the Marine Biological Laboratory and Past President of the Ecological Society of America, at 7:45 p.m. in the auditorium of the Falmouth Library (use the new entrance on Kathryn Lee Bates Road).

Although the lecture is open to the public, it is given primarily for the membership of SPABSI. Please be sure to mark this date and time on your calendar.

Donald J. Zinn, Chairman



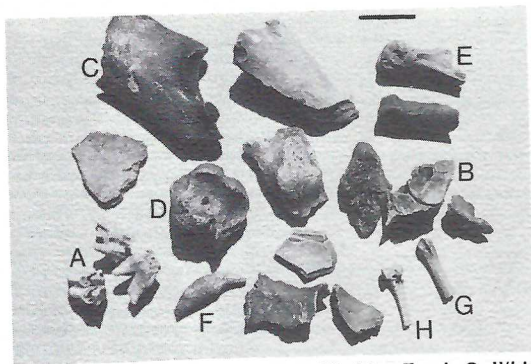


Figure 3: Miscellaneous bones identified by Frank C. Whitmore (U.S. Geological Survey) and Storrs L. Olson (Smithsonian Institution). Deer (*Odocoileus virginianus*): A. three upper molars; B. petrosal (ear bone); C. olecranon process of ulna (leg joint); D. tarsal bone (ankle of front leg); E. phalanx (toe bone). Dog (*Canis sp.*): F. lower canine tooth of medium-sized dog; G. metapodial (toe) of small adult dog. Diving duck, or scaup (*Aythya sp.*): H. distal end of humerus (wing).

muscle scars. A few specimens each of oysters, soft clams, bay scallops and slipper shells were found. Next most abundant were long bones of deer, split as though for extraction of marrow (Fig. 2). Bones and teeth of other animals (Fig. 3) include ones from the common deer, diving duck and dog. At least two dogs are represented, a small adult male and a medium-size dog. Dog bones have long been found in Indian middens (Loomis and Young, 1912), and it is known that the Indians had three breeds, one use of which was for food.

Artifacts are from two sources — Indian and European. The Indian artifacts made of deer bone included a chisel perhaps for opening mollusks, and a bone pierced by a drill hole (Fig. 2-A,B) for unknown use. Stone artifacts are more abundant. Two arrowheads (Fig. 4-C) made of the same white quartzite that is typical of other arrowheads were found on the ground surface in nearby Quis-

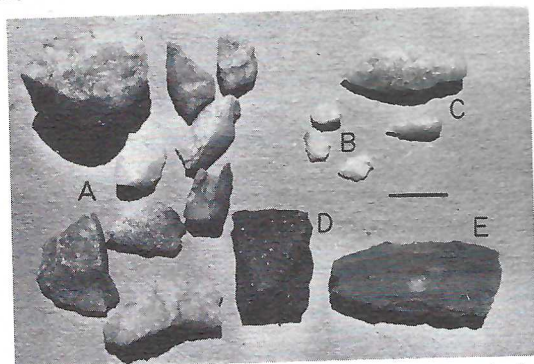


Figure 4: Stone artifacts made by Indians: A. nine worked pieces of quartzite used as stock; B. three quartzite chips; C. two quartzite arrowheads; D. metavolcanic adze; E. hard siltstone "bearing block" for drill.

sett. Irregular pieces of the same quartzite probably are discarded working stock, but only three chips produced during working were noted. Also present (Fig. 4-D,E) was an adze-shaped piece of metavolcanic rock (probably Triassic in age), and a piece of hard siltstone having a hole such as may have served as a bearing for a bow. All of these rock types are common along the beaches where they have been concentrated by wave erosion of glacial till. Larger glacial rocks occur as roughly broken rectangular pieces, some evidently oxidized by fire — and thus considered to be hearth stones.

The second kind of artifact are those of European origin. Pieces of clay pipe include two broken bowls still bearing black discoloration from burned tobacco, and two pieces of pipestem (Fig. 5-C). Six pieces of well-rusted iron were found: possibly one an iron strap, two handmade nails, and three case-knife blades still retaining part of the tang that originally was inserted into a wooden handle (Fig. 6-A, B, C). A possible knife handle, though a rather small one, consists of a cylinder of lead within a tube of bone or ivory (Fig. 7); one projecting end of the lead cylinder which was slotted lengthwise about 0.3 inch with a hole continuing beyond the slot. Possibly a tanged iron or steel blade was inserted into the slot and hole. Also found was a chip of blue-and-white glazed china and part of the rim of a cheap earthenware pot that still retains lines indicative of turning

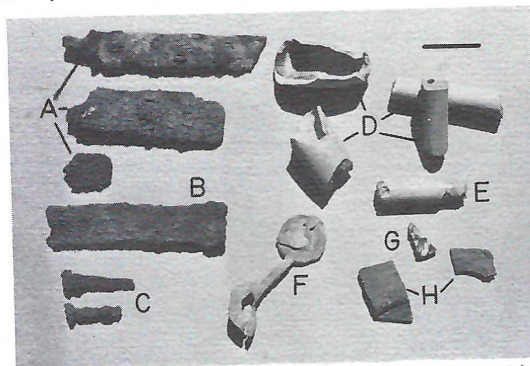


Figure 5: Artifacts of European origin presumably used by the Indians: A. three steel knife blades; B. steel strap? C. two handmade nails; D. two broken bowls and two broken stems of clay pipes; E. "Knife handle" made of bone or ivory filled with lead; F. lead ornament with bird effigy; G. piece of blue-and-white china; H. two pieces of cheap earthenware pottery.

on a pottery wheel (Fig. 5-G, H). Most curious of all is a piece of rolled sheet lead that was cut into an ornament — a ring that connected via a narrow strip to a slightly cupped disk, on which was soldered a duck-shaped effigy (Fig. 8). On the effigy are the raised letters, XP (*chi rho*)? made during the lead rolling operation.

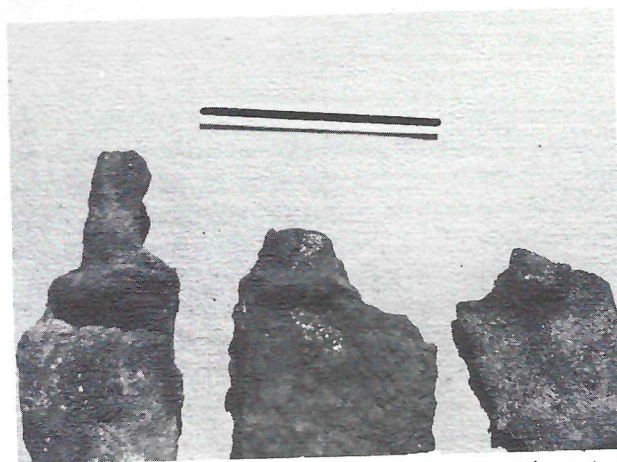


Figure 6: Steel case-knife blades (Fig. 5-A) that retain part of tang for insertion into wooden handle.

#### Conclusions

The mixture of Indian stone artifacts and European clay pipes and metal indicates that at least part of the midden was deposited probably after 1620 (Pilgrim landing) and before 1800 (when clay pipes must have become little



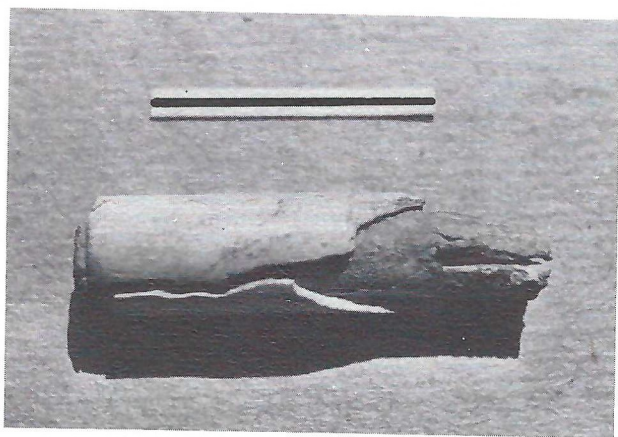


Figure 7. Possible knife handle (Fig. 5-E) made of lead that fills a bone or ivory tube. Found by sharp-eyed Robert L. Edwards.

used), probably nearer the beginning of that time range. Of course, the midden could have been stratified – with Indian artifacts at the bottom and European ones at the top, but this midden was so small that it seems more likely to have been made during perhaps only a single feast. Support for this thought is provided by negative evidence – the absence of many quartzite chips, of Indian pottery, and of glass from broken European bottles. The site is near but not at the shore of Oyster Pond. No fish bones were found, but perhaps they were destroyed by weathering. The shells are of common edible mollusks that do not now live in Oyster Pond. Prior to about 1765 the pond contained oysters and perhaps all of the other mollusk species in the midden, but probably these mollusks lived only near the south end that borders Vineyard Sound. Blocking of the mouth of the formerly long narrow open marine bay by natural growth of a bay-mouth bar (and finally by road-building), prevented the tidal exchange – with high-salinity ocean water, changed the bay into a brackish-water pond by seepage of ground water along the shores, diminished, and then about 1765, eliminated the population of oysters and other mollusks (Emery, 1969).

In summary, the small midden may have been the site of a single feast by the local Wampanoag Indians (part of the large Algonkian language group). Their name for the region was adopted as the original name for Falmouth by

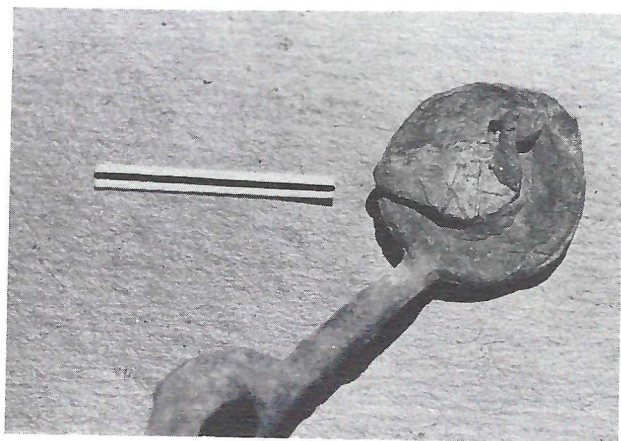


Figure 8. Lead ornament (Fig. 5-F). Note XP in raised letters on lead of bird effigy.

the European settlers – Suckanessett (*where the black wampum is found*). Wampum beads were made from the quahog. One group at the feast may have brought mollusks from the beaches of Vineyard Sound or perhaps from the south end of Oyster Pond and ducks from the pond, and another group brought venison and village dogs from the land area. The assemblage of artifacts in this unimportant but locally interesting site suggests that the feast occurred sometime between 1620 and 1800, and perhaps even more likely between 1660 (the date that Falmouth was settled) and 1765 (near the end of clay pipes and before Oyster Pond became too fresh for oyster life). The European artifacts remaining in the midden are ones most likely for the Indians to have been given, traded for, or otherwise obtained.

K.O. Emery

#### References

- Emery, K.O., 1969, *A Coastal Pond Studied by Oceanographic Methods*: New York, American Elsevier, 80 pp.
- Loomis, F.B., and D.B. Young, 1912. "On the Shell Heaps of Maine," *American Journal of Science*, v. 34, pp. 17-42.

## The Knob Report

First to report on the good things. The path up the hill at the end of The Knob has become badly eroded by rain water washing down. The Quissett Harbor side of the neck leading to the end of The Knob was slowly being undermined to the extent that it was not only dangerous but also there was a chance that one of these days the sea might break through. It did not seem right to invade the general fund of "Salt Pond", so "The Knob Committee" sent out a letter to members of the Quissett Yacht Club and residents of Quissett explaining the situation and asking for donations. The results were most gratifying. The path has been rebuilt and the rip-rap repaired and extended. When you see it we are sure you will all be pleased. Letters were not sent to the regular "Salt Pond" member mailing list. Many of you, other than Quissett residents, we are sure, enjoy the walk to "The Knob" and may care also to contribute. Surplus money is being put in a separate fund, the income from which will be used exclusively on "The Knob." Contributions may be sent to Salt Pond Areas Bird Sanctuaries, Inc., earmarked for "The Knob Fund." Please bear in mind this is a special appeal and should not take the place of any regular contribution or dues you may give to "Salt Pond."

Now, for the bad news. We still had trouble with some of the people who came out to The Knob last year. Some of the public does not understand that "The Knob" property is technically not "public." It is a privately owned wild life sanctuary and nature walk and may set its own rules. The beach is not a public beach,