

Environmental Education Field Guide To Rhode Island

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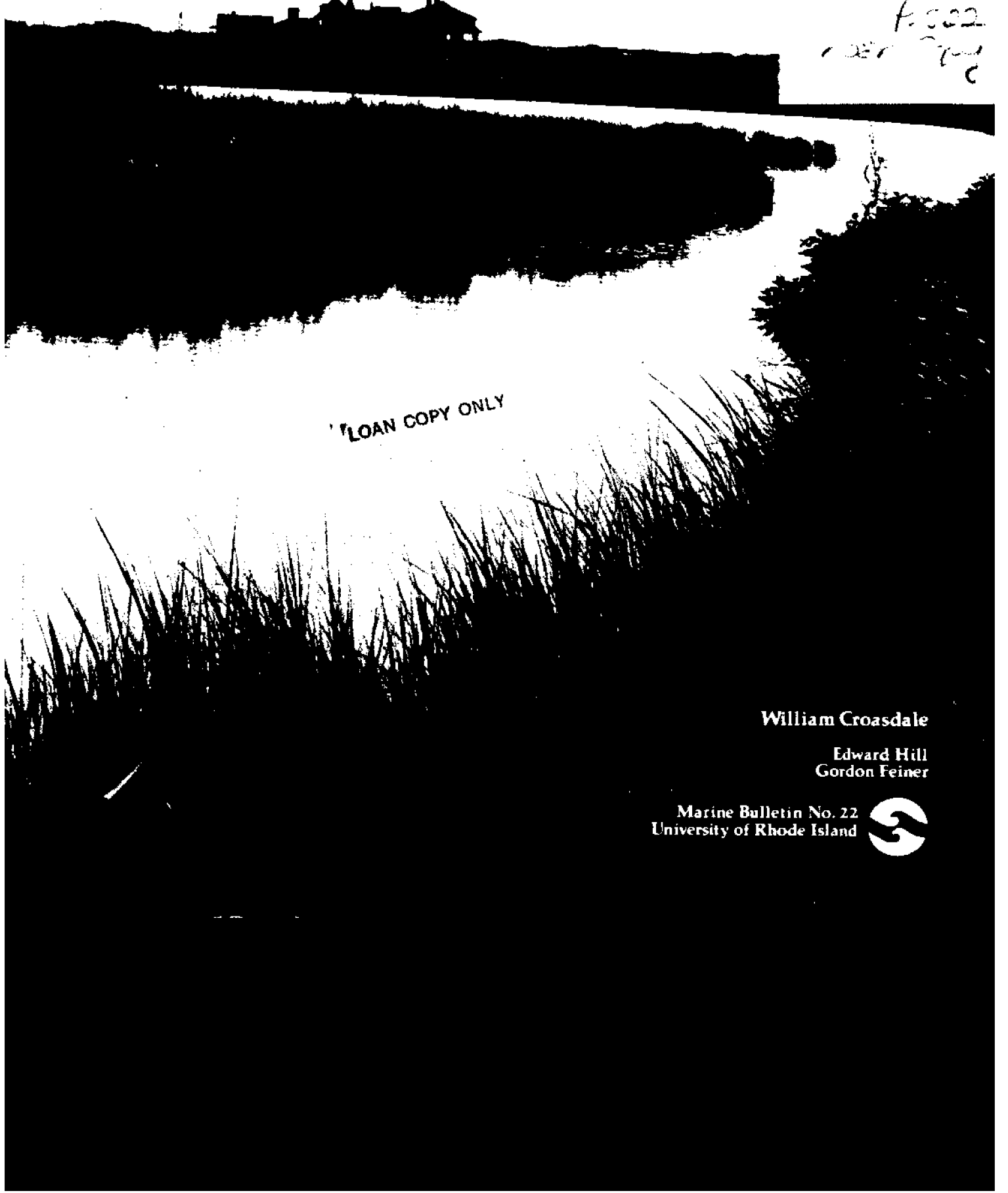
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William Croasdale

Edward Hill
Gordon Feiner

Marine Bulletin No. 22
University of Rhode Island



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Introduction

This Environmental Education Field Guide was prepared with the teacher in mind; to offer experiences that should expand the scope and depth of classroom teaching. Field work can help develop student awareness of the environment and complement in-class education.

Teachers are encouraged to visit the sites listed in this guide before taking their students there. Specific activities can then be planned; the teacher will be familiar with the flora, and fauna and topography of each site, and can inform the class.

In most instances collecting specimens is discouraged or prohibited. Where it is permitted it should be done with care, taking only that which is needed.

The sites are listed in alphabetical order by town, with a description of activities, recommendation for age groups, and requirements for prior arrangements.

Questions and suggestions are welcome, and should be directed to Dr. William Croasdale, Department of Education, Chafee Hall, University of Rhode Island, Kingston, R.I. 02881.

Acknowledgements

This book was compiled and revised by Edward Hill under the direction of Dr. William Croasdale. This is a revision of an earlier booklet compiled by Gordon Feiner and Martha Monaghan, also under the direction of Dr. Croasdale.

We greatly appreciate the help of Prentice K. Stout of the Marine Advisory Service and George Seavey of Coastal Resources Center for assistance in preparing this revision.

Bird lists compiled by Nancy Wissmuller.



Additional Resources

Audubon Society 40 Bowen St. Providence

The Rhode Island Audubon Society maintains a good environmental and natural history library for use by primary and secondary teachers, older secondary students, and college students. There is a program with a full-time teacher available for presentations. This is done on a contract basis. There is also a consultant service for outdoor education and the development of outdoor facilities.

The society has teacher workshops in environmental education and current environmental problems in Rhode Island.

The society bookstore has a standard ten percent discount for teachers.

All inquiries should be directed to the Audubon Society at 521-1670.

Department of Natural Resources

Much information can be obtained by contacting the Public Relations Officer, Department of Natural Resources. Phone: 277-2776. The department is located at 83 Park Street, Providence.

Teaching Aids

Mrs. M.B. House of the Biology Department at Roger Williams College has prepared an audiovisual course in environmental education. Contact her at 255-2270.

Dr. R.N. Keogh of the Biology Department at Rhode Island College has video tapes and instructional audio modules at the Curriculum Resource Center. He can be reached at 831-6600.

The Rhode Island Film Library is at Rhode Island College. Phone Rhode Island Film Library for a catalog.

The University of Rhode Island makes available to schools the use of their film library. For more information and a catalog call the University of Rhode Island Audio Visual Center at 792-2148.

Guest Lecturers

Raytheon Corporation (submarine division) has 45 people available as speakers, planners, reviewers and counselors on the topics of quantitative procedures, river basins, math modeling and national status of instrumentation and automation of waste treatment plants. Contact the Manager of Commercial Operations at 847-8000.

Tours

Ciba-Geigy Corporation give tours of their plant, a textile factory at 180 Mill Street, Cranston. Contact the Plant Manager at 941-3000 for more information.

Perryville Hatchery is located on Old Post Road in South Kingstown. Phone: 783-5351.

Lafayette Hatchery is located on Old Post Road, North Kingstown. Phone: 294-4662.

Marine Advisory Service University of Rhode Island Narragansett, R.I. 02882

Prentice K. Stout, Marine Education Specialist, has available to all interested elementary and secondary teachers a wide range of curriculum oriented materials. Contact him at 792-6211.

Refuge Manager

Ninigret National Wildlife Headquarters
Charlestown, Rhode Island 02813
Phone: 364-3106

Please call for maps and information about U.S. Fish and Wildlife property in Rhode Island. Also available are activity/information packets for educational use on selected refuges.

Mrs. Pickett M. Greig

Member of the Jamestown Garden Club
Phone: 423-0111

For information and tours of the Jamestown area please call in advance.

An official Rhode Island highway map is available from the Department of Economic Development, Providence.

Helpful Equipment

Useful field equipment:

1. Camera
2. Collecting jars and bags
3. Hip waders
4. Dip nets
5. Binoculars, telescope, spotting scopes
6. Insect nets
7. Rock hammer
8. Hand lens
9. First aid kit

How the Field Guide is Organized

The sites have been divided into seven districts (see below). At the beginning of each district is a list of sites located by a number on the maps. The maps can help in planning trips by showing which sites are in the area.

At the end of the field guide are three appendices: field biology, geology, and history. The sites in each appendix are listed by district number.

With each appendix is a list of books which you may find helpful.

District 1

Newport, Jamestown, Middletown, Portsmouth, Block Island, Tiverton, and Little Compton

District 2

South Kingstown, Narragansett, Westerly, Charlestown, Hopkinton, and Richmond

District 3

Coventry, West Greenwich, Exeter, Burrillville, Gloucester, Scituate, and Foster

District 4

North Smithfield, Woonsocket, Cumberland, Smithfield, Lincoln, and Central Falls

District 5

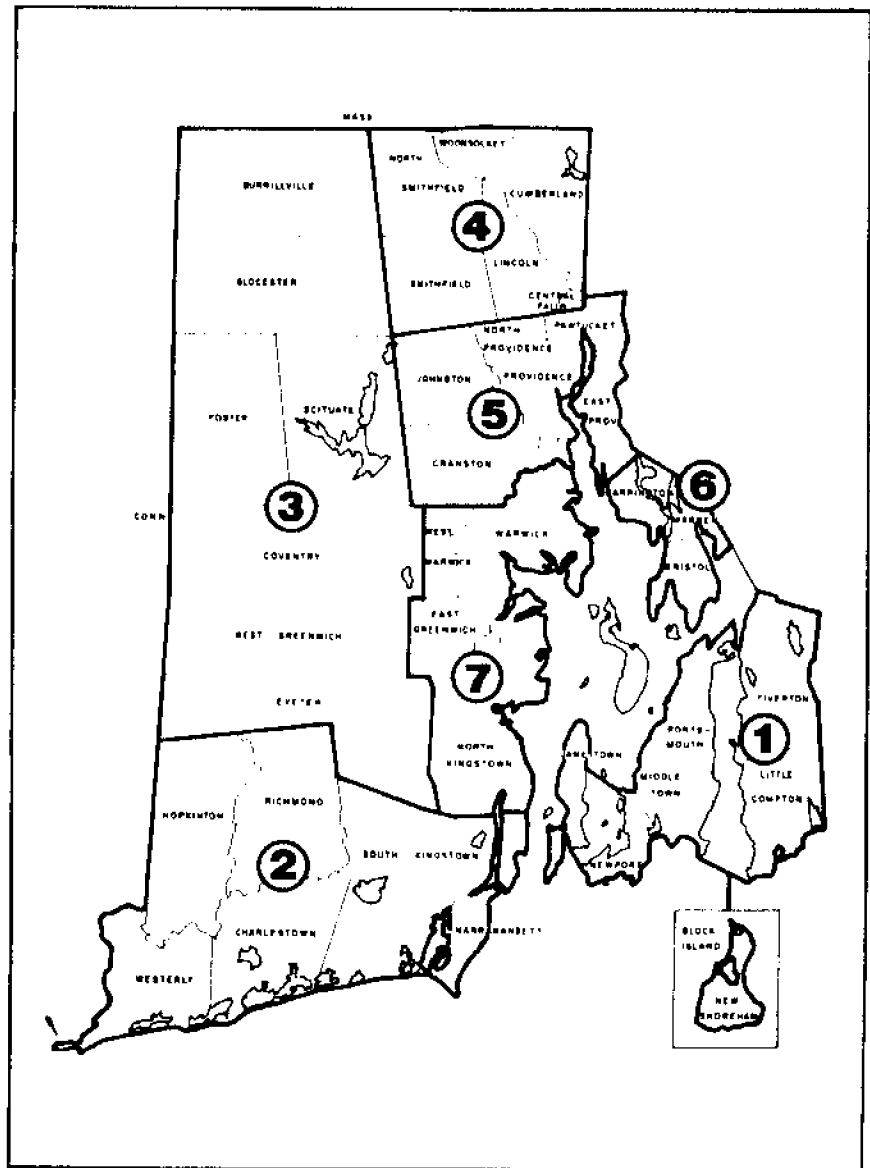
Johnston, Cranston, North Providence, Pawtucket, East Providence, and Providence

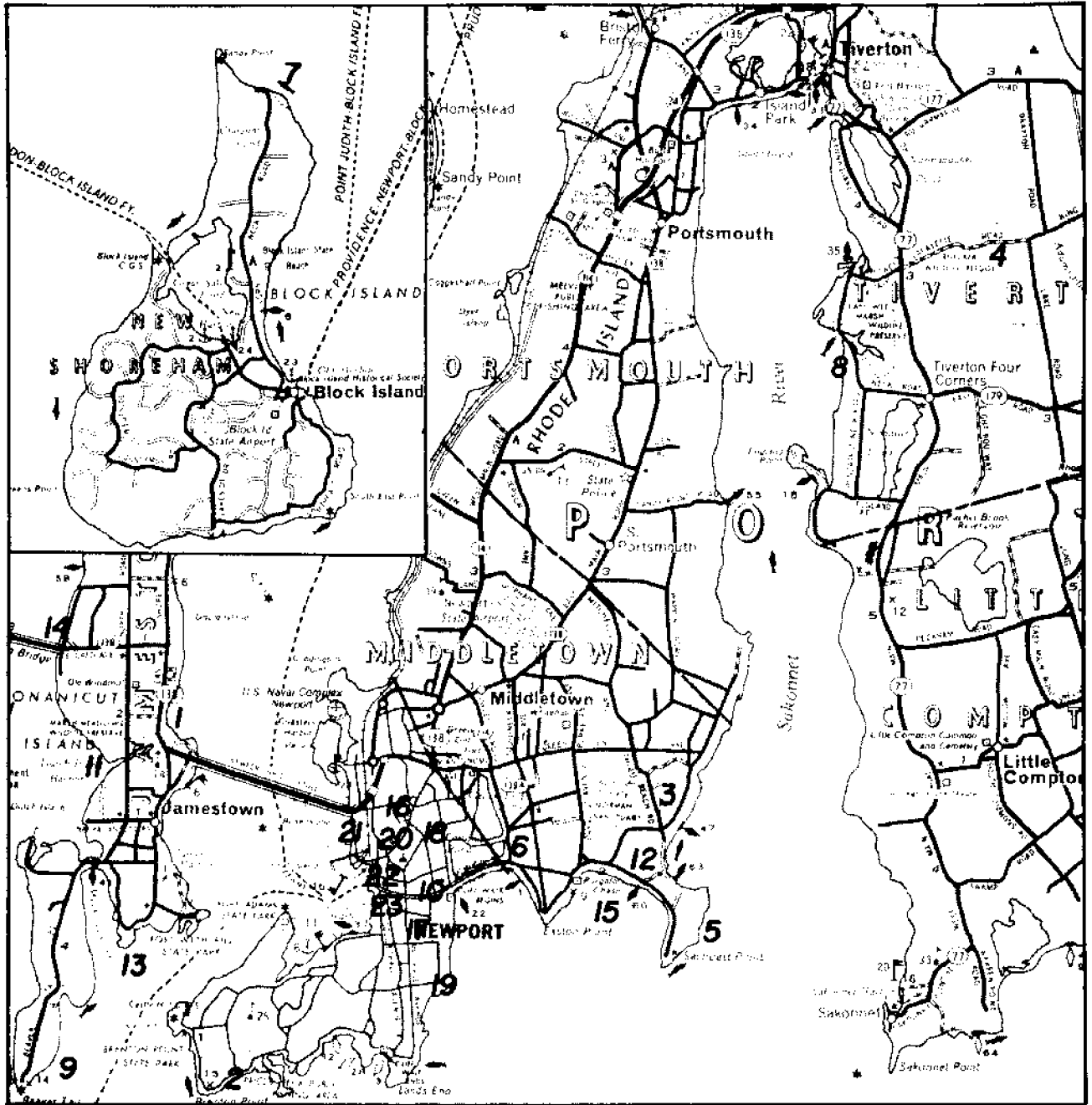
District 6

Bristol, Warren, and Barrington

District 7

West Warwick, East Greenwich, North Kingstown, and Warwick





District 1

- 1 Fox Mill Pond
- 2 Ocean Drive Marsh
- 3 Norman Bird Sanctuary
- 4 Emilie Ruecker Wildlife Refuge
- 5 Sachuest Refuge
- 6 Aquidneck Island Potpourri Tour
- 7 North end of Block Island
- 8 Seapowet Marsh
- 9 Beavertail
- 10 Cliff Walk
- 11 Marsh Meadows Wildlife Preserve
- 12 Hanging Rock
- 13 Fort Wetherill
- 14 Rock Formations under Jamestown Bridge
- 15 Purgatory Chasm
- 16 Wanton-Lyman-Hazard House
- 17 Trinity Church
- 18 Touro Synagogue
- 19 Redwood Library
- 20 Old Colony House
- 21 Hunter House
- 22 Edward King House
- 23 Brick Market

1 Fox Mill Pond Jamestown

Activity. This 45-acre site has salt march, upland pasture, dense brush growth and fronts on the east passage of Narragansett Bay and Sheffield Cove.

Grades. K-12

Fee. None.

Prior Arrangements. Permission from the R.I. Audubon Society is required. Phone: 521-1670.

2 Ocean Drive Marsh Newport

Activity. There are salt and freshwater marshes here, good sites for bird observation and easy access to ocean pools.

Grades. K-12

Fee. None.

Prior Arrangements. Obtain permission from the R.I. Audubon Society. Phone: 521-1670.

3 Norman Bird Sanctuary Third Beach Road, Middletown

Activity. The Sanctuary consists of trail-side museums, small animal displays and an extensive trail system covering 400 acres of open fields, marshes, ponds, streams, salt marsh, dense woodland, beaches with dunes and woodcock breeding grounds.

Grades. K-12

Fee. There is no fee charged for educational groups, although donations are welcome.

Prior Arrangements. The Sanctuary is usually booked far in advance, so make plans early. Call the Director at 846-2577.

Of Special Interest. Instructors are available who will prepare a program for your class, depending upon its needs and interests. These programs are available on a pre-school through university level. There are teaching modules available on an individual level for class members, including audiovisual equipment, film strips, etc.

4 Emilie Ruecker Wildlife Refuge Seapowet Avenue, Tiverton

Activity. This 30-acre site borders on a salt marsh. There are two trails which go through this marsh, and an overgrown farmland with both salt and freshwater marshes. Students will notice various stages of succession of arrowwood and blueberry.

Grads. K-12.

Fee. None.

Prior Arrangements. Make prior arrangements by contacting the R.I. Audubon Society. Phone: 521-1670.



5 Sachuest Refuge
Middletown

Activity. This area includes both salt and freshwater marshes, beaches with dunes, excellent bird observation area, and an excellent area to study the encroachment of man on his environment.

Grades. K-12.

Fee. None.

Prior Arrangements. This site was recently taken over by the U.S. Bureau of Sport Fisheries and Wildlife. Obtain permission to use the site by contacting Richard E. Griffith, regional director, Bureau of Sport Fisheries and Wildlife, John W. McCormack Post Office and Courthouse, Boston, Mass. 02109.

6 Aquidneck Island Potpourri Tour
Middletown

Activity. The following route is suggested: Go over the Newport Bridge to the center of Newport. Look for signs leading to the historic mansions and follow a southeast route across Bellevue Ave. to Memorial Blvd. Follow Memorial Blvd. past Eaton's Beach to St. George's Chapel, your first stop. Next stop: Purgatory Chasm. This is a unique rock formation on the west side of Second Beach. Next: Second Beach itself. The beach is excellent for the study of dune formations, soil erosion and marshland. Fourth stop: Norman Bird Sanctuary. This trip is approximately six miles long. If time allows, a ride around the ocean on the southwest part of Aquidneck Island is delightful.

Grades. K-8, depending on the detail with which each site will be studied.

Fee. None.

Prior Arrangements. None.



7 North End of Block Island

Block Island

Activity. This area provides excellent sites for the study of geologic beach structures and for the making of beach profiles. During the fall migration period, it is an excellent observation point for waterfowl which are not usually seen on the mainland.

Grades. K-12.

Fee. None.

Prior Arrangements. This area is under state control.

8 Seapowet Marsh

Puncatest Neck Road, Tiverton

Activity. This large salt marsh is one of the most picturesque in Rhode Island, surrounded by woodland and agricultural fields. This area is excellent for the observation of shore birds, including egrets and herons. The inlet to the marsh hosts populations of scallops and quahogs.

Grades. K-12.

Fee. None.

Prior Arrangements. For information, contact Seapowet Marsh Wildlife Preserve.

9 Beavertail

Conanicut Island

Activity. The rock outcrop of slate at Beavertail provides excellent examples of faults and overturned faults. The rocky intertidal zone is abundant in marine animals and plants. Try to plan a visit at low tide for easier access to the rocks.

Grades. 6-12.

Fee. None.

Prior Arrangements. None.

10 Cliff Walk

Begins at Memorial Blvd., Newport

Activity. The Cliff Walk allows the observer to study three types of rock: granite, coal-age sedimentary rock, and metamorphic rock. The effects of erosion can also be easily viewed, and there is a spectacular view of the sea.

Grades. 7-12.

Fee. None.

Prior Arrangements. None.

Note: Deciding how much of the Cliff Walk should be covered should depend on the age of the students and the time available. The entire walk is over two miles long.

11 Marsh Meadows Wildlife Preserve

North Road, Conanicut Island

Activity. The preserve offers an abundant display of marine invertebrates such as clams, crabs, and starfish. In the drier regions of the preserve, meadow type plants and animals can be seen.

Grades. K-12.

Fee. None.

Prior Arrangements. The preserve is under state control.

12 Hanging Rock

Norman Bird Sanctuary, Middletown

Activity. The rock outcrop which shows much faulting is made up of conglomerate. The unusual compression of the large-sized pebbles gives evidence of great metamorphic activity. This rock is one of nature's great balancing feats.

Grades. 5-12.

Fee. None.

Prior Arrangements. The Norman Bird Sanctuary should be contacted at 846-2577.

13 Fort Wetherill State Park

Conanicut Island

Activity. The granite walls which help make up the fortifications are the only outcrop of granite on Conanicut Island. The granite is of the same age as the Westerly granite. The use of this naturally protective area for a fort should be noted.

Grades. 6-12.

Prior Arrangements. The fort is under state control. Contact Department of Natural Resources. Phone: 277-2776.

14 Rock Formations under Jamestown Bridge

Conanicut Island

Activity. Extending hundreds of feet in both directions from directly under the Jamestown Bridge is a fine example of garnet-staurochite schist. The garnets are the small red crystals imbedded in the grey schist. The staurochite crystals are long and narrow and usually cross to form an X.

Grades. 9-12.

Fee. None.

Prior Arrangements. None.

Note: Contact Jamestown Police about where to park your bus.

15 Purgatory Chasm

Memorial Blvd., Middletown

Activity. A fine example of what weathering and erosion can do to solid rock.

Access is easy from here to other geologic points of interest, such as the hanging rock and beach areas.

Grades. K-12.

Fee. None.

Prior Arrangements. None.

16 Wanton-Lyman-Hazard House
Broadway (near Washington Square)
Newport

Activity. This house in Jacobean style was built in 1675 and is recognized as the oldest house in Newport. Structure and style make this house an excellent spot to visit.

Grades. 7-12.

Fee. Adults \$1.50, children \$.75; group rates available.

Prior Arrangements. Open from July to Labor Day.

17 Trinity Church
Spring and Church Streets, Newport

Activity. This church, built in 1726, houses the first church bell rung in New England. Other aspects of the early architecture make this site an interesting and unique place to visit.

Grades. 7-12.

Fee. None.

Prior Arrangements. Open daily in the summer and by appointment. For information, call 846-0660.

18 Touro Synagogue
Touro St., Newport

Activity. This synagogue, the oldest in the nation, was built in 1763. It is a National Historic Landmark.

Grades. 7-12.

Fee. None.

Prior Arrangements. Open June to Labor Day, Monday through Friday 10-5 and Sunday 2-4.

19 Redwood Library
Bellevue Ave., Newport

Activity. Built in 1748, this is the oldest library building in continuous use in America. It is also recognized as a National Historic Landmark.

Grades. 7-12.

Fee. None.

Prior Arrangements. Open weekdays 10-6, and 10-5 during August.

20 Old Colony House
Washington Square, Newport

Activity. This National Historic Landmark is the nation's second oldest capitol. It was in this building that Rhode Island's acceptance of the Declaration of Independence was declared.

Grades. 5-11.

Fee. None.

Prior Arrangements. Open September through June daily 9:30-4 and Saturday 9:30-noon.

21 Hunter House
54 Washington St., Newport

Activity. This old homestead built in 1748, contains a fine collection of antique furniture, silver, and portraits. Located near the historic Newport waterfront.

Grades. 5-11.

Fee. Adults \$1.50, children (6-15) \$.75.

Prior Arrangements. Open during the winter by appointment only. Open during April on Saturday and Sunday 10-5, May through November daily from 10-5. For more information, call 847-7516.

22 Edward King House
King Street, Aquidneck Park, Newport

Activity. This unusual home is of Italianate villa style. It was constructed in 1845 and is beautifully preserved.

Grades. 6-11.

Fee. None.

Prior Arrangements. The house is open Monday through Friday 9-4:30. For more information call 846-7426. Please call prior to visit.

23 Brick Market
Corner Long Wharf and Thames St., Newport

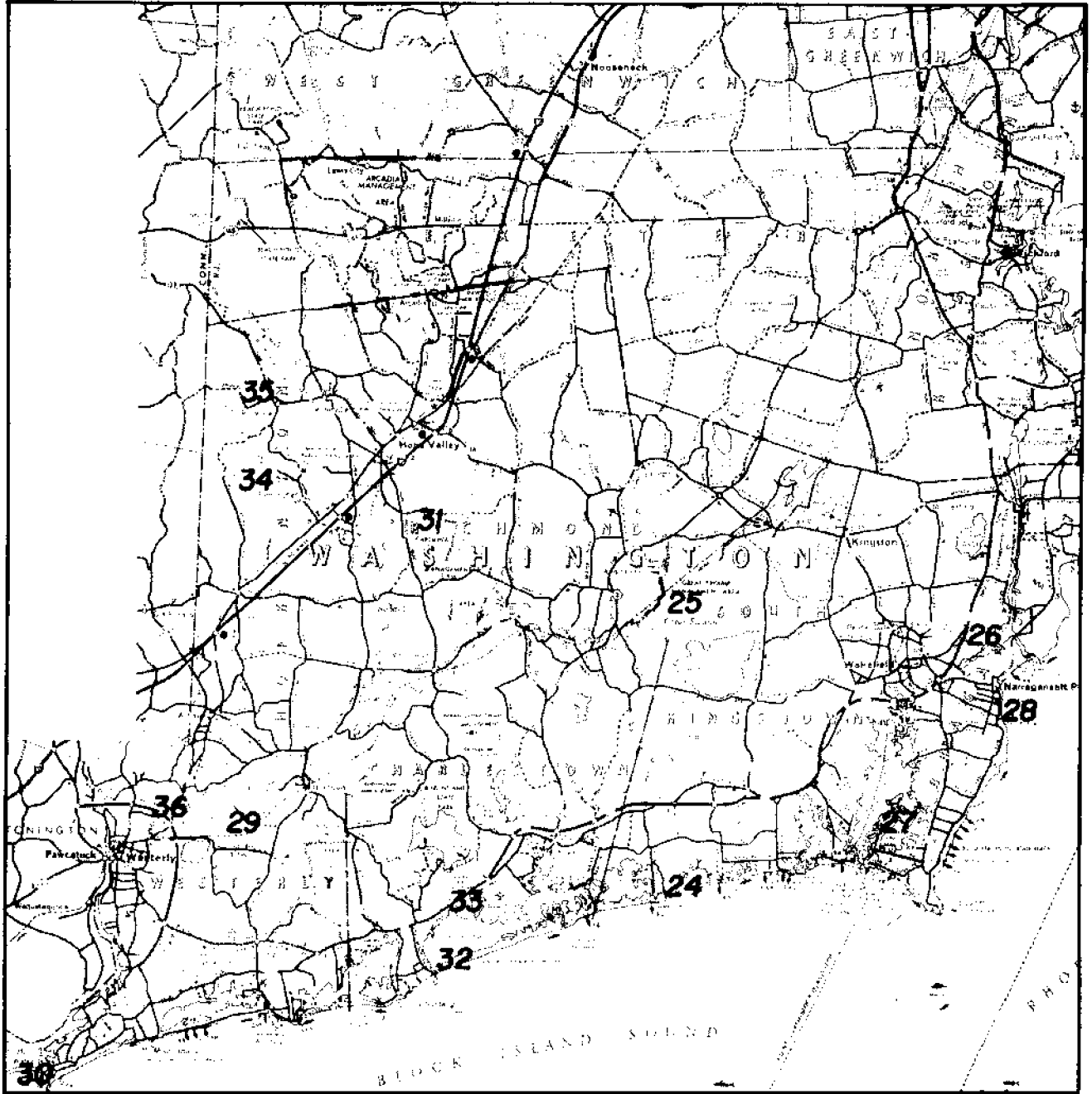
Activity. Now a National Historic Landmark, this structure was built in 1762 originally as a market and granary. It is now located in the heart of Newport's waterfront market district.

Grades. 6-10.

Fee. None.

Prior Arrangements. Open Monday through Saturday 10-5.





District 2

- 24 Trustom Pond Refuge
- 25 Great Swamp
- 26 Indian Run Woods
- 27 Galilee Bird Sanctuary
- 28 Narragansett Basin Granite
- 29 McGowan Swamp, Bradford Fresh-water Wetland
- 30 Napatree Point
- 31 Carolina Management Area
- 32 Barrier Beach and Saltwater Pond
- 33 Kimball Wildlife Refuge
- 34 Ell Pond Complex
- 35 Yawgoog Scout Camp
- 36 Westerly Granite Quarry

24 Trustom Pond National Wildlife Refuge and Moonstone Waterfowl Refuge
Schoolhouse Rd., South Kingstown
Moonstone Beach Rd., South Kingstown

Activity. This 450-acre site (both refuges) includes Moonstone Beach, both salt and fresh water marshes, red maple swamps and grasslands. This is an ideal place for viewing extensive numbers of waterfowl all year round as well as other wildlife. Birds sighted in the area include swans, many species of ducks, gulls and herons. There is also much of geologic interest.

Grades. K-12.

Fee. None.

Prior Arrangements. The refuges are controlled cooperatively by the U.S. Fish and Wildlife Service and the Audubon Society of Rhode Island. Both groups should be contacted for permission. Maps and speakers are available upon request. Available in the fall of 1976 will be an activity/information packet for use on the Trustom Pond National Wildlife Refuge. Audubon phone: 521-1670, U.S. Fish and Wildlife phone: 364-3106.

25 Great Swamp Management Area
Route 2, South Kingstown

Activity. This white-cedar swamp touches Wordens Pond, South Kingstown, and allows an interesting exploration of marshland. There is a living bog in the area, and specimens of flora and fauna can be gathered. In late September the area is an excellent bird sanctuary, and in early May osprey nests can be observed.

Grades. K-12.

Fee. None.

Prior Arrangements. Call the R.I. Recreation and Wildlife Authority for permission to collect specimens. Phone: 789-0281.



26 Indian Run Woods

Tower Hill Road (Wakefield)
South Kingstown

Activity. This 50-acre site has overgrown farm land, dense woods, freshwater streams and swamp conditions on a flood plain.

Grades. K-12.

Fee. None.

Prior Arrangements. Obtain permission to use the site by calling the R.I. Audubon Society. Phone 521-1670.

27 Galilee Bird Sanctuary

Galilee Rd., Galilee

Activity. This sanctuary offers a fine observation point for all the waterfowl associated with the coast of Rhode Island. The natural setting it provides is excellent for studies of bird behavior as well as identifying and counting species.

Grades. 5-12.

Fee. None.

Prior Arrangements. This area is controlled by Rhode Island Department of Natural Resources. For information call 277-2776.

28 Narragansett Basin Granite

Hazard Ave., Narragansett

Activity. This large outcrop which borders the water is a fine example of medium-grain pink granite. The rock is much younger than the Westerly granite. Very little mining of this stone took place.

One may find common marine intertidal creatures here.

Grades. 7-12.

Fee. None.

Prior Arrangements. None.

29 McGowan Swamp

Bradford Freshwater Wetland, Bradford

Activity. This area provides excellent examples of swamp plants and animals for collection and study. Comparison studies can be made of vegetation and wildlife between this freshwater swamp and others around the state. This site would also lend itself to swamp-ecology studies.

Grades. 9-12.

Fee. None.

Prior Arrangements. For information contact R.I. Department of Natural Resources.

30 Napatree Point

Westerly

Activity. This scenic beach site offers a fine spot for observation of waterfowl and beach life. Geologic beach processes such as winter erosion and dune structure can also be studied here, and it is also an excellent site for making beach profiles.



Grades. 6-12.

Fee. None.

Prior Arrangements. None.

Note: The Watch Hill fire district has asked that all visiting groups stay on the marked trails and not disturb the dunes.

31 Carolina Management Area

Pine Hill Rd., Richmond

Activity. This large area contains many forms of vegetation. Of special interest is a fine example of a cedar swamp with the associated wildlife. Also in this area are many freshwater lakes and brooks all ideal for specimen collecting and study.

Grades. 6-12.

Fee. None.

Prior Arrangements. For a map, call 789-0281.

32 Barrier Beach and Salt Water Pond

East Beach and Ninigret Conservation Area, Charlestown

Activity. This fragile geologic formation is the best in the state. State control has helped stabilize the dune height thus creating a natural spot for observing waterfowl and beach animals. The pond area, though very large, is relatively shallow. The bottom is sandy and hosts populations of oysters, soft-shelled clams, blue crabs, bay scallops, eels, and other marine species.

Grades. K-12.

Fee. None.

Prior Arrangements. The area is state controlled. For reservations, call Burlingame State Park at 322-7337. For a map of this area, call 789-0281.

33 Kimball Wildlife Refuge

Prosser Trail and Watchaug Pond, Charlestown

Activity. This 30-acre site has frontage on Watchaug Pond and is adjacent to a camping area in Burlingame State Park. Well-maintained trails crisscross the area.

Grades. K-12.

Fee. None.

Prior Arrangements. Obtain permission to use this site through the R.I. Audubon Society. Phone: 521-1670.

Of Special Interest. A group leader will take your class on a tour of the area, if this is desired. Call Miss Eloise Saunders at 322-8033.

34 Ell Pond (Rockville)

Hopkinton

Activity. Dystrophic conditions and zonation can be observed at this site, and a transect can be established. The water is characteristically brown in color and has a concentration of nutrients, organic matter and humid materials. Oxygen content and pH are low. Flora and fauna of bog conditions can be collected. Along the trail, "Appalachian" types of vegetation (i.e. rhododendron, laurel and hemlock) are located. Succession on bare rock is observable in several places.

Grades. 10-12.

Fee. None.

Prior Arrangements. None.

Of Special Interest. Parking is very poor and there is a walk of two to three miles to the site. If collecting is anticipated, all materials should be brought. These might include dip nets, plastic bags, pH kit, oxygen kit, buckets, first aid kit, compass and clipboard.

35 Yawgoog Scout Camp

Camp Yawgoog Road, Hopkinton

Activity. The camp is located on 1200 acres of forests and trails. There is a large lake located within the camp, and another lake that is man-made. There are also many nature trails. One will find a great variety in the terrain, including cliffs and caves for exploring.

Grades. K-12.

Fee. None.

Prior Arrangements. Arrangements should be made by calling the Camp Director, Phillip Tracy, at the Providence Boy Scout Headquarters. Phone: 351-8700.

Of Special Interest. Collecting is permitted, but materials for this purpose should be brought. Maps are available at the camp office for the various hiking trails and for tree identification.

36 Westerly Granite Quarry

Westerly

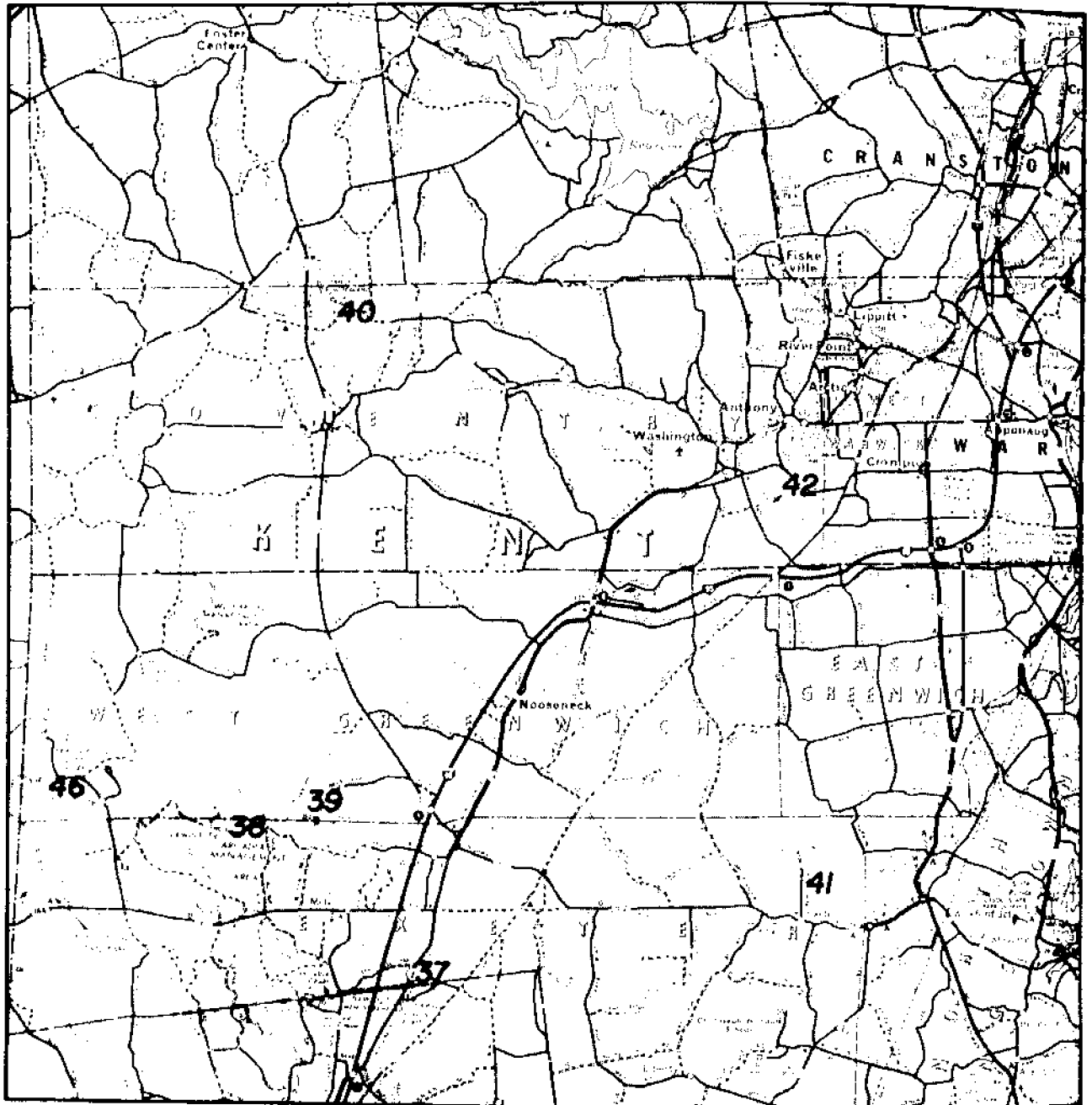
Activity. This now inactive quarry provides an excellent view of how this important building stone was removed from the ground. There are numerous mineral deposits in the area, all excellent for collecting and identifying. For more advanced geology students, this is a fine site for strike and dip measurements.

Grades. 7-12.

Fee. None.

Prior Arrangements. Contact Donald Bonner at the Bonner Monument Co. for information. Phone: 377-2493.

District 3 (southern half)



District 3

- 37 Teft Hill Trail, Dewey State Park
- 38 Arcadia State Park
- 39 Breakheart Brook Trail
- 40 George B. Parker Woodland
- 41 Queen's Fort
- 42 General Nathanael Greene Homestead
- 43 Nature Trail, Ginny-B Campground
- 44 Fayette Barlett Woodland
- 45 Ponagansett High and Middle School Ground
- 46 Penny Hill Trail
- 47 Scituate Reservoir
- 48 George Washington Management Area
- 49 Bowditch Islands
- 50 Purgatory Chasm



- 37 Teft Hill Trail
Dewey State Park, Exeter

Activity. The park provides the best forest-type vegetation in the state, along with numerous other types of plant life. This area is excellent for specimen collecting, identifying, and forest ecology studies.

Grades. 6-12.
Fee. None.

Prior Arrangements. The park is state controlled. For information, call R.I. Department of Parks and Recreation at 277-2632.

- 38 Arcadia Management Area
Route 3, West Greenwich

Activity. The park has numerous trails for hiking and nature walks. A freshwater lake provides a fine area for study of pond life and the collection of aquatic plants.

Grades. 7-12.
Fee. None.

Prior Arrangements. The park staff can be contacted at 539-7643; trail maps are available upon request.

- 39 Breakheart Brook Trail
Arcadia Management Area,
West Greenwich

Activity. This beautiful trail in the northern sector of the Arcadia Management Area provides the chance to study the development of brook type vegetation and life forms. This area is well suited for the collection of specimens.

Grades. 7-12.
Fee. None.

Prior Arrangements. Arcadia Management Area staff can be contacted at 539-7643.

- 40 George B. Parker Woodland
Biscuit Hill Road, Coventry

Activity. This 450-acre site is undeveloped, but it has an oak-hickory forest, woodland and stream valleys.

Grades. 8-12.
Fee. None.

Prior Arrangements. Obtain permission from the R.I. Audubon Society. Phone: 521-1670.

- 41 Queen's Fort
Exeter/North Kingstown line,
West on Stony Lane

Activity. This rough area of stones and boulders is actually a glacial boulder train. In Rhode Island's history there are unauthenticated references to this area's being used by the Indians as a hideout.

Fee. None.
Prior Arrangements. None

- 42 General Nathanael Greene Homestead
Faft Street, Coventry

Activity. Besides the historic home, there is an old cemetery in back of the house. Beyond this are the falls which supplied the energy to run most of the factories of the time.

Grades. 3-7.
Fee. None.

Prior Arrangements. Contact the caretaker, Mr. Nourse, prior to a visit. Phone: 821-8630. The Homestead is closed December and January.

District 3 (northern half)



43 Nature Trail at Ginny-B Campground
Johnson Road, Foster

Activity. A wide variety of local flora can be observed in natural woods (oak forest) along this trail. There is also a wide variety of ferns, laurels, lichens (open and wooded ledges), ground covers, shrubs and trees located here.

Grades. K-12.

Fee. None.

Prior Arrangements. Contact the owner of this trail, Alton M. Bassett. Phone: 397-7982.

44 Fayette Bartlett Woodland
Burrillville

Activity. This 70-acre site is covered by an oak-hickory pine forest on overgrown farm land.

Grades. K-8.

Fee. None.

Prior Arrangements. Contact the R.I. Audubon Society before using this site. Phone: 521-1670.

45 Ponagansett High and Middle School Grounds

Anan Wade Road (North Scituate),
Scituate

Activity. A variety of stages of succession can be observed at this location, including a pond, small stream, small swampy area, open field, grown up field and a forest.

Grades. 4-12.

Fee. None.

Prior Arrangements. Make prior arrangements through the Superintendent of Schools. He can be reached by calling 647-3363 or by writing to him at the Foster-Glocester Regional District, North Scituate, R.I. 02851.

46 Penny Hill Trail
Near Beach Pond Camps, West Greenwich

Activity. The trail goes over the top of Penny Hill (nice view) and through an excellent white pine forest with unique vegetation. A side trail to the southeast goes to the bog mentioned below. Start from Austin Farm Road near Lewis City. The trail runs within 20 feet of an excellent example of black spruce bog vegetation and ecology. It is unusual to find northern species this far south and at such low elevations. The area is also a good example of a glacial kettle hole.

Grades. 7-12.

Fee. None.

Prior Arrangements. None. This is public land.

47 Scituate Reservoir
Scituate

Activity. In the areas around the reservoir are well-developed forests, especially suited for forest ecology studies. The state parks offer easy access.

Grades. 10-12.

Fee. None.

Prior Arrangements. Contact the state park you wish to visit.

48 George Washington Management Area
Burrillville

Activity. The park provides many scenic trails for hiking and exploring. The isolated areas provide fine vantage points for wildlife observation and study. Also included in this area are large freshwater lakes.

Grades. K-12.

Fee. None.

Prior Arrangements. The park staff should be contacted prior to visiting. Phone: 568-6700. For maps, call 647-3367.

49 Bowdish Islands
Route 44, Glocester

Activity. This site displays a unique form of vegetation which appears to be floating on a lake. The islands themselves are private property, so they should only be viewed from the George Washington Management Area. The use of binoculars, telescopes, or spotting scopes is highly recommended.

Grades. 6-12.

Fee. None.

Prior Arrangements. The George Washington Management Area staff should be contacted prior to visiting. Phone: 568-6700. A map should be obtained so the viewing point can be decided upon; for a map phone 647-3367.

50 Purgatory Chasm
Off Route 146, Uxbridge, Massachusetts

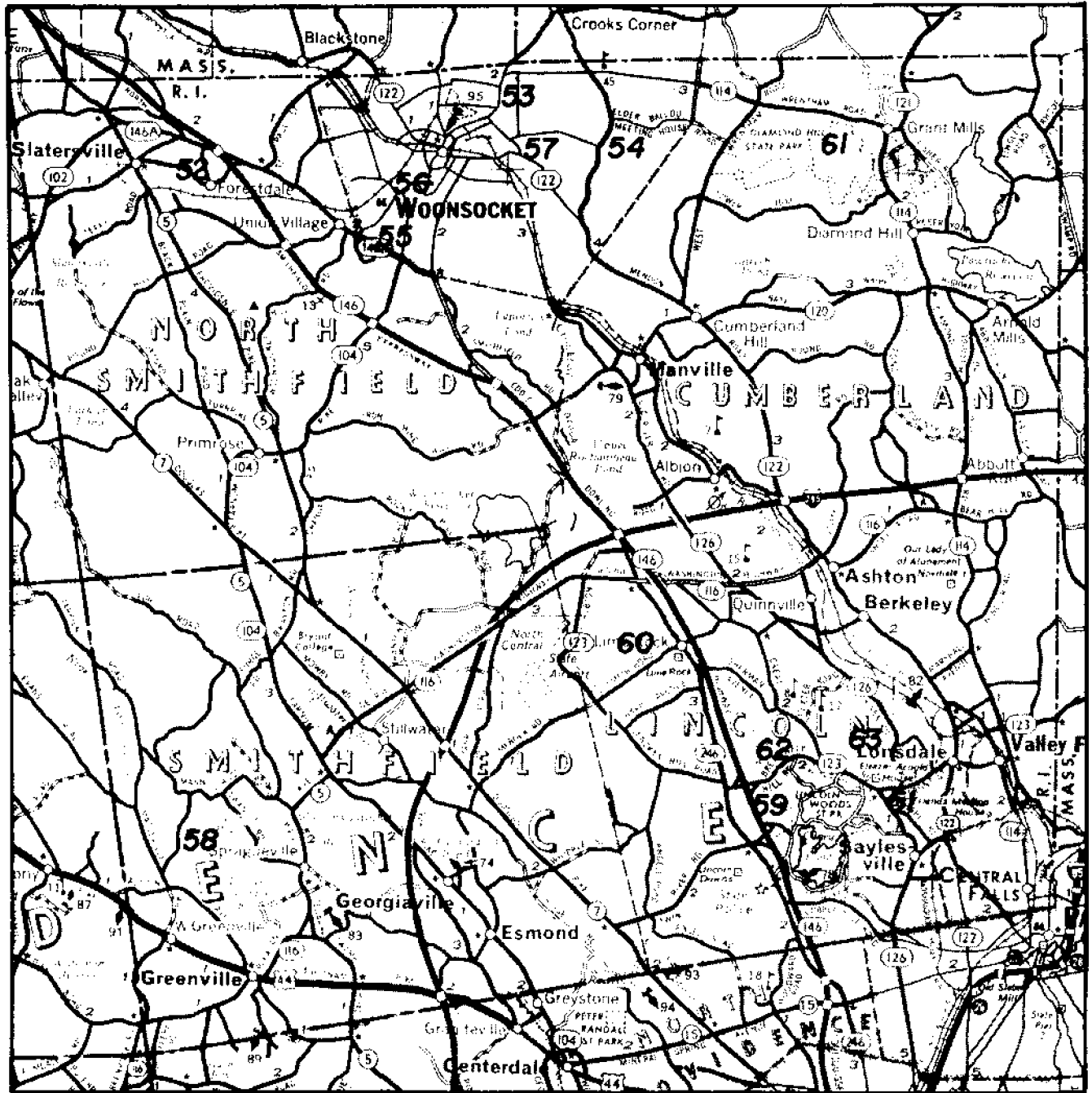
Activity. There are rock formations to be studied, along with interesting rock layers. The canyons can be walked, and collection of samples is permitted.

Grades. 5-12.

Fee. None.

Prior Arrangements. None.

Of Special Interest. Rock chisels, collection bags and photographic equipment should be brought to the site.



District 4

- 51 Friends Meeting House
- 52 Halliwell Memorial School
- 53 Citizens Memorial School
- 54 East Woonsocket School
- 55 Globe Park Elementary School
- 56 Bernon Heights School
- 57 Cass Park
- 58 Camp Shepard
- 59 Lincoln Woods State Park
- 60 Conklin Lime Quarry
- 61 Diamond Hill State Park
- 62 Limerock Quarry
- 63 Eleazer Arnold House

51 Friends Meeting House Great and River Roads

Activity. This meeting house, built in 1703, served as the place of worship for the Strong Population of the Society of Friends, which inhabited the Providence area at that time. The Society of Friends moved into Rhode Island in 1657 from Massachusetts and became a firmly established and respected sect.

Grades. 5-12.

Fee. None.

Prior Arrangements. Reservations should be made well in advance of a visit. Phone: 723-2515.

52 Halliwell Memorial School Great Road, North Smithfield

Activity. The 37-acre site contains an open field, live brook, high and low brush, soft and hardwood forests, a pond and a marsh area.

Grades. K-6.

Fee. None.

Prior Arrangements. Contact both the principal of Halliwell School (762-2793) and the Director of Schools for North Smithfield (769-5492) for permission to use this site.

53 Citizens Memorial School Winthrop Street, Woonsocket

Activity. Within this 55-acre site is a bog, flood plain and polluted river. The area floods in the spring and much small aquatic life can be observed. There is also a marsh area slowly becoming polluted from the cesspools of neighboring houses.

Grades. K-12.

Fee. None.

Prior Arrangements. Contact the Director of Schools in Woonsocket. Phone: 765-1210.

54 East Woonsocket School Mendon Road, Woonsocket

Activity. East Woonsocket School is located on land that was once a small family farm. There is an old field which was once plowed, an intermittent bog, a pond overgrown with algae, high shrubs, a small pine forest and a spring-fed stream.

Grades. K-6.

Fee. None.

Prior Arrangements. Obtain permission to use the site from the Director of Schools in Woonsocket. Phone: 765-1210.



55 Globe Park Elementary School
Avenue A, Woonsocket

Activity. There is a one-mile nature trail laid out around the school with several species of trees, including wild black cherry, red and white oak, hickory, red sumac, grey birch and black oak. There is also a landform showing erosion.

Grades. K-6.

Fee. None.

Prior Arrangements. Obtain permission to use the site by calling the Director of Schools in Woonsocket. Phone: 765-1210.

56 Bernon Heights School
Logee Street, Woonsocket

Activity. This site has extensive rock ledge, hardwood forests and burn areas. In the spring, a bog area is visible with pitcher plants, skunk cabbage and other interesting flora.

Grades. K-12.

Fee. None.

Prior Arrangements. Contact the Director of Schools in Woonsocket. Phone: 765-1210.

57 Cass Park
Cass Avenue, Woonsocket

Activity. This 55-acre site has a slowly reconstructing forest, a live running brook and Silvesters Pond, which is very deep and, as yet, only scantily researched. It is an ideal place for exploration and research.

Grades. 7-12.

Fee. None.

Prior Arrangements. None.

(f) Special Interest. Collecting materials should be brought to the site if their use is planned.

58 Camp Shepard
North Smithfield

Activity. This 140-acre site of rocky and hill terrain is excellent for hiking and nature walks. Freshwater brooks and ponds provide fine opportunities for collecting water animals and observing waterfowl.

Grades. 6-12.

Fee. The fee depends upon services rendered by the camp.

Prior Arrangements. Contact Dennis Wholey, Providence Central YMCA, 331-9200 well in advance of trip. The camp usually does not open until May.

59 Lincoln Woods State Park
Route 146, Lincoln

Activity. This area has very well-developed forest with easy access. Studies of both woodland vegetation and wildlife can be conducted here. Also in this area is an abandoned marble quarry, similar to the Limerock quarries. Scattered throughout the woods are large boulders deposited by glaciers.

Grades. 7-12.

Fee. None.

Prior Arrangements. The park is state controlled. Phone: 723-7892.

60 Conklin Lime Quarry
Route 146 (Limerock), Lincoln

Activity. Students can observe a limestone quarry in operation and collect rock and mineral samples.

Grades. 7-9, and those with particular interest in geology.

Fee. None.

Prior Arrangements. Make prior arrangements by telephoning the Conklin Limestone Company. Phone: 723-0889.

61 Diamond Hill State Park
Route 114, Cumberland

Activity. This area of great geologic interest offers a vein of quartz almost a mile long. The vein has many joints and fissures in it due to metamorphic activity in the area after it was formed. Many other minerals can be found in the area; it is a favorite spot among mineral collectors.

Grades. 9-12.

Fee. None.

Prior Arrangements. The area is state controlled. For more information, call 333-6400.

62 Limerock Quarry
Route 146, Lincoln

Activity. In this area both operative and inoperative quarries can be found. The actual mineral being mined today is marble, but the state mineral, bowenite, can be seen in the marble. The quarries are perhaps some of the oldest of their type in the country.

Grades. 7-12.

Fee. None.

Prior Arrangements. The Conklin Company should be contacted before visiting. Phone 723-0889.

63 Eleazer Arnold House
Routes 123/126 Saylesville, Lincoln

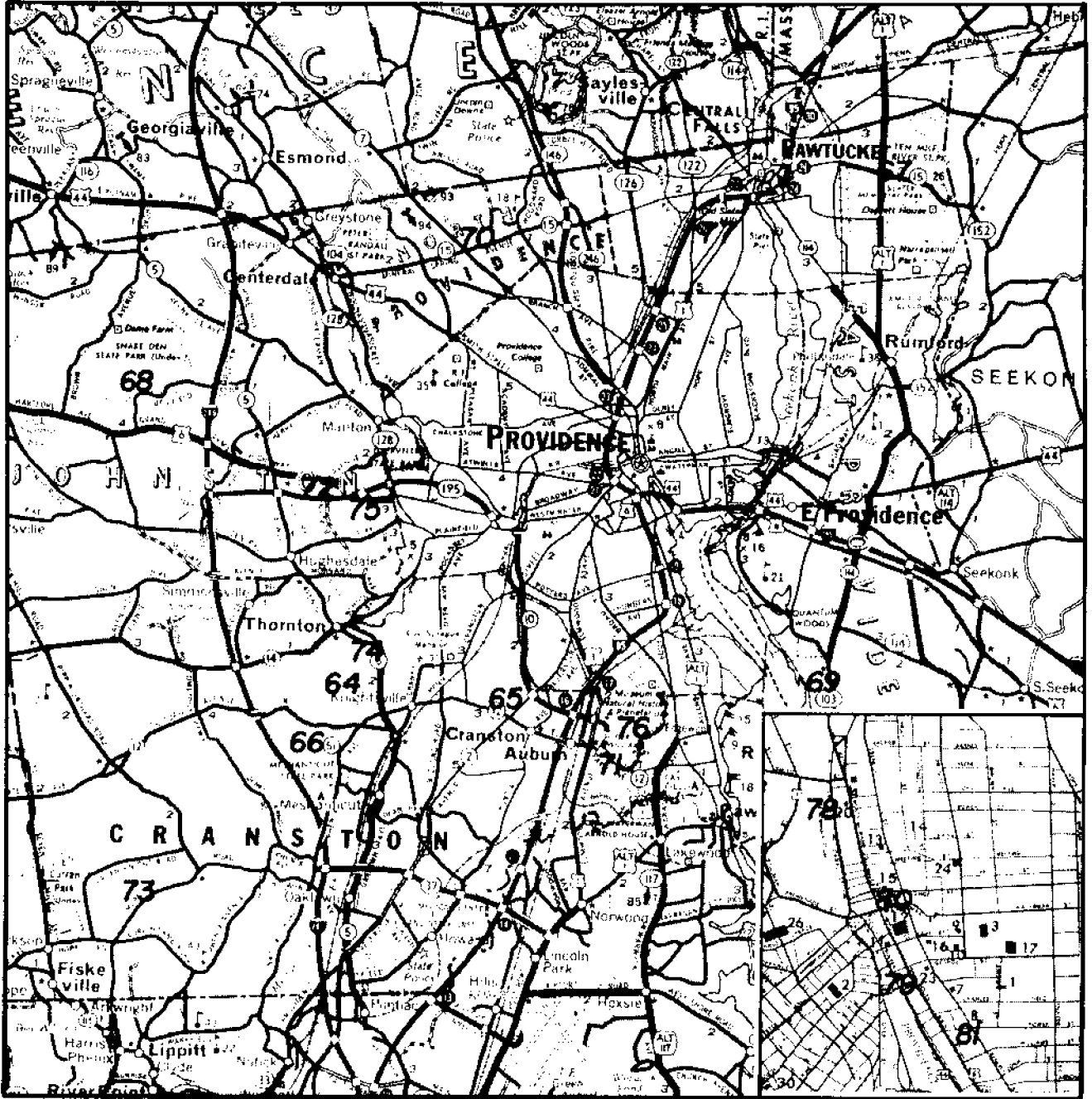
Activity. Built in 1687, this structure once served as a tavern and a courthouse. It is now a National Historic Landmark.

Grades. 5-11.

Fee. \$.50.

Prior Arrangements. This site is open by appointment only. For more information, call 726-1691.





District 5

- 64 Furnace Hill Brook
- 65 Spectacle Pond
- 66 Champlin Scout Reservation
- 67 Slater Park
- 68 Snake Den State Park
- 69 Squatum Grove
- 70 Twin Rivers
- 71 Roger Williams Park
- 72 The Dame Farm
- 73 Margaret Robertson Knight Refuge
- 74 Stonehill School
- 75 Soapstone Quarry
- 76 Glacial Esker, Roger Williams Park
- 77 Old Slater Mill
- 78 Roger Williams Spring
- 79 Stephen Hopkins House
- 80 First Baptist Church
- 81 John Brown House

64 Furnace Hill Brook
Plainfield Road and Phoenix Avenue,
Johnston

Activity. This is Rhode Island's best example of a stream being slowly polluted. There are five excellent locations to stop and examine the ecology of the stream and the way in which man is polluting this water. There are also examples of a stream-fed meadow, wading pools, glacial deposits and silting.

Grades. 3-12.

Fee. None.

Prior Arrangements. It is advisable to send someone out to the brook before the visit in order to decide on stopping areas.

Of Special Interest. The use of a vehicle for traveling is mandatory.

65 Spectacle Pond
Cottage Street, next to
Twin Oaks Restaurant, Cranston

Activity. This pond provides an excellent study of pond pollution.

Grades. K-12.

Fee. None.

Prior Arrangements. It is recommended that someone visit Spectacle Pond prior to the scheduled trip in order to best realize how this site might be most effectively studied.

66 Champlin Scout Reservation
223 Scituate Avenue, Cranston

Activity. This is a 130-acre site containing over 50 varieties of identified trees, approximately 22 species of birds during the winter, five spring-fed ponds and a brook which shows erosion. There are also hard and softwood forests, glacial deposits and a swamp. The reservation has several varieties of trees not indigenous to this area, including a giant sequoia, a ponderosa pine, a 3000-year-old Chinese tree, Japanese cypress, fir, hemlock, umbrella trees, a dawn redwood from China and an Alaskan cypress.

Grades. K-12.

Fee. None.

Prior Arrangements. Visit by appointment only. Contact Ranger Willar at 944-9550 to make arrangements. The camp is closed Thursday.

Of Special Interest. A specific student-teacher ratio must be maintained. For grades one through nine, one teacher must accompany every five students. For grades nine through twelve, one teacher must accompany every ten students. Fact sheets and a tree identification chart are available at the site.



67 Slater Park
Pawtucket

Activity. There is a zoo and a museum located within the park. Younger children will enjoy the animals (i.e., polar bears, seals, lions, llamas, Scottish Highland cattle, European red deer, peacocks, hens, a leopard, an elephant, a Sacred Cow and the usual assortment of monkeys). Older children would perhaps visit Daggett House, built in 1685, which is a museum of the Colonial Revolution.

Grades. K-8.

Fee. At the museum, each child is charged \$.25. There is no fee for the zoo.

Prior Arrangements. The Daggett House is open by appointment and can be reached by calling 726-1532 or 761-8146.

Of Special Interest. Picnic facilities are available.

68 Snake Den State Park
Johnston

Activity. This large area of rough terrain and steep ledges also contains one of the earlier granite quarries in the state.

Grades. 7-12.

Fee. None.

Prior Arrangements. Contact the state park staff before visit at 277-2776.

69 Squantum Grove
Route 103, East Providence

Activity. This scenic area provides fine examples of glacial outwash with large boulders of sandstone, conglomerate, and a few of granite. The granite boulders must have been carried by the glacier 20 miles before being dropped here. There are also outcrop ledges of sandstone and conglomerate.

Grades. 8-12.

Fee. None.

Prior Arrangements. None.

70 Twin Rivers

Douglas Pike (Route 7), North Providence

Activity. Twin Rivers has two good-sized ponds and some wooded area. This is a good location for studying pollution.

Grades. 3-12.

Fee. None.

Prior Arrangements. None.

Of Special Interest. Collecting of samples is permitted here.

71 Roger Williams Park
Providence

Activity. Roger Williams Park is a city park with lakes, trees and open areas for walking and exploring. The park features a bird house, an elephant house, a contact area for small animals, a natural history museum, and a planetarium.

Grades. K-12.

Fee. None.

Prior Arrangements. The planetarium requires advance notice of a trip. Phone: 941-5640.

Of Special Interest. At the natural history museum, tours are available on a walk-in basis. At the planetarium, a guide and lecturer will accompany the class if desired.

72 The Dame Farm

Brown Avenue, Johnston

Activity. This is a working historical farm that dates back to the 1780's. There are woods, a trail set up by the Audubon Society, a pond, and an orchard.

Grades. K-12.

Fee. \$.50 per person.

Prior Arrangements. Make arrangements to visit the farm by calling Dorothy Palmer. Phone: 934-1449.

Of Special Interest. Trail guides and maps are available at the site. A *Resource*



Guide for Teachers is available upon request to Mrs. F. Palmer, Jr., 10 Lakeview Ave., Johnston.

73 Margaret Robertson Knight Refuge
Hope Road, Cranston

Activity. This is a well-developed woodland with some swamp and streams, and a minimal trail system.

Grades. 7-12.

Fee. None.

Prior Arrangements. Contact the R.I. Audubon Society for further information. Phone: 521-1670.

74 Stonehill School
21 Village Avenue, Cranston

Activity. There is a nature trail here which is excellent for identifying flora indigenous to Rhode Island. There is also a large glacial formation providing numerous rocks for identification, and trees bordering the trail which are numbered for easy identification.

Grades. K-6.

Fee. None.

Prior Arrangements. Contact the Director of Instruction at the Cranston School Department. Phone: 785-0400, Ext. 188.

Of Special Interest. Maps of the area can be obtained from the Director of Instruction, 845 Park Avenue, Cranston, R.I. 02910.

75 Soapstone Quarry
Hartford Ave., Johnston

Activity. This unusual outcrop of soapstone was successfully mined by the Narragansett Indians, who used the stone for bowls. Depressions can still be seen where the soapstone was cut out.

Grades. K-12.

Fee. None.

Prior Arrangements. None.

76 Glacial Esker
Roger Williams Park, Providence

Activity. A glacial esker is a ridge of sand and gravel which appears to resemble a railroad embankment. This esker is one of very few still surviving in the state. The esker projects north for about 1000 feet from the southwest part of the lake, forming a peninsula.

Grades. 8-12.

Fee. None.

Prior Arrangements. The park authorities should be contacted before a visit.

77 Old Slater Mill Museum
Roosevelt Avenue, Pawtucket

Activity. Students are shown hand-spinning and weaving, as well as textile machinery in motion. There is a gift shop with items costing a little as \$1. Guided tours through the museum are offered on school days at 10 a.m.

Grades. K-12.

Fee. None.

Prior Arrangements. Reservations are required. These can be made by calling the museum at 725-8638 or by writing to P.O. Box 727, Pawtucket, R.I.

Of Special Interest. Booklets providing a detailed description of the founding and growth of the mill are available for \$.25 per copy. If a group plans to lunch before returning to school, Slater Park is highly recommended. It is about ten minutes by car from the mill.

78 Roger Williams Spring
254 North Main St., Providence

Activity. As the marker records, the area around the spring was the site of the original Providence settlement. The area was settled in 1636.

Grades. K-12.

Fee. None.

Prior Arrangements. None.

79 Stephen Hopkins House
Benefit and Hopkins Sts., Providence

Activity. This National Historic Landmark was the home of Stephen Hopkins, who was the governor of Rhode Island prior to the Revolutionary War and a signer of the Declaration of Independence. The structure was built in 1707.

Grades. K-12.

Fee. None.

Prior Arrangements. The house is open from April through December on Wednesday and Saturday, 1-4. For more information call 421-0694.

80 First Baptist Church in America
North Main and Thames Sts., Providence

Activity. This early church is the meeting house of the oldest Baptist congregation in the country. The congregation was founded by Roger Williams in 1638, and the present building was constructed in 1775. The church is a National Historic Landmark.

Grades. 7-12.

Fee. None.

Prior Arrangements. The church is open daily May through October, 10-4 and November through April, 11-3.

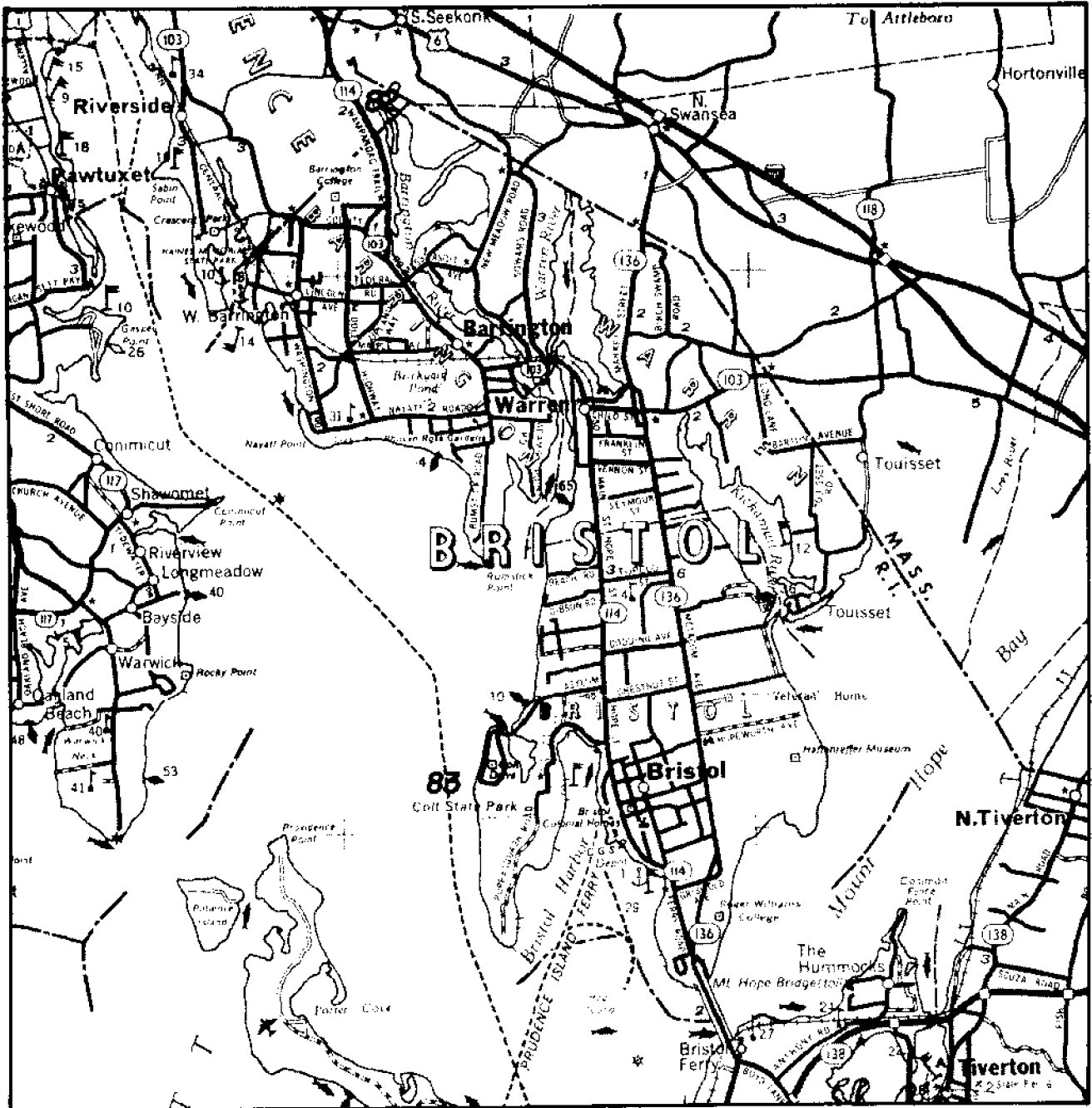
81 John Brown House
52 Power St., Providence.

Activity. This mansion, built in 1786, is late Georgian in style. The architecture and style make it worth a visit.

Grades. 7-12.

Fee. Adults \$1.00, students \$.50, children \$.25.

Prior Arrangements. The house is open from Tuesday through Friday, 11-4 and weekends, 2-4.



District 6

82 Caratunk Wildlife Refuge
83 Colt State Park

82 Caratunk Wildlife Refuge
427 Brown Avenue, Seekonk,
Massachusetts

Activity. This 150-acre farm has upland vegetation, several small ponds and a six-acre pond complex. There is a marsh on the site, along with a red maple swamp, extensive areas of oak-hickory, beech, white pine and hemlock. There is also a partially developed trail system which is in the process of being completed.

Grades. K-12.

Fee. None.

Prior Arrangements. Contact the R.I. Audubon Society (521-1670) or Larry Ransom, manager of the refuge, at 761-8432.

83 Colt State Park
Bristol

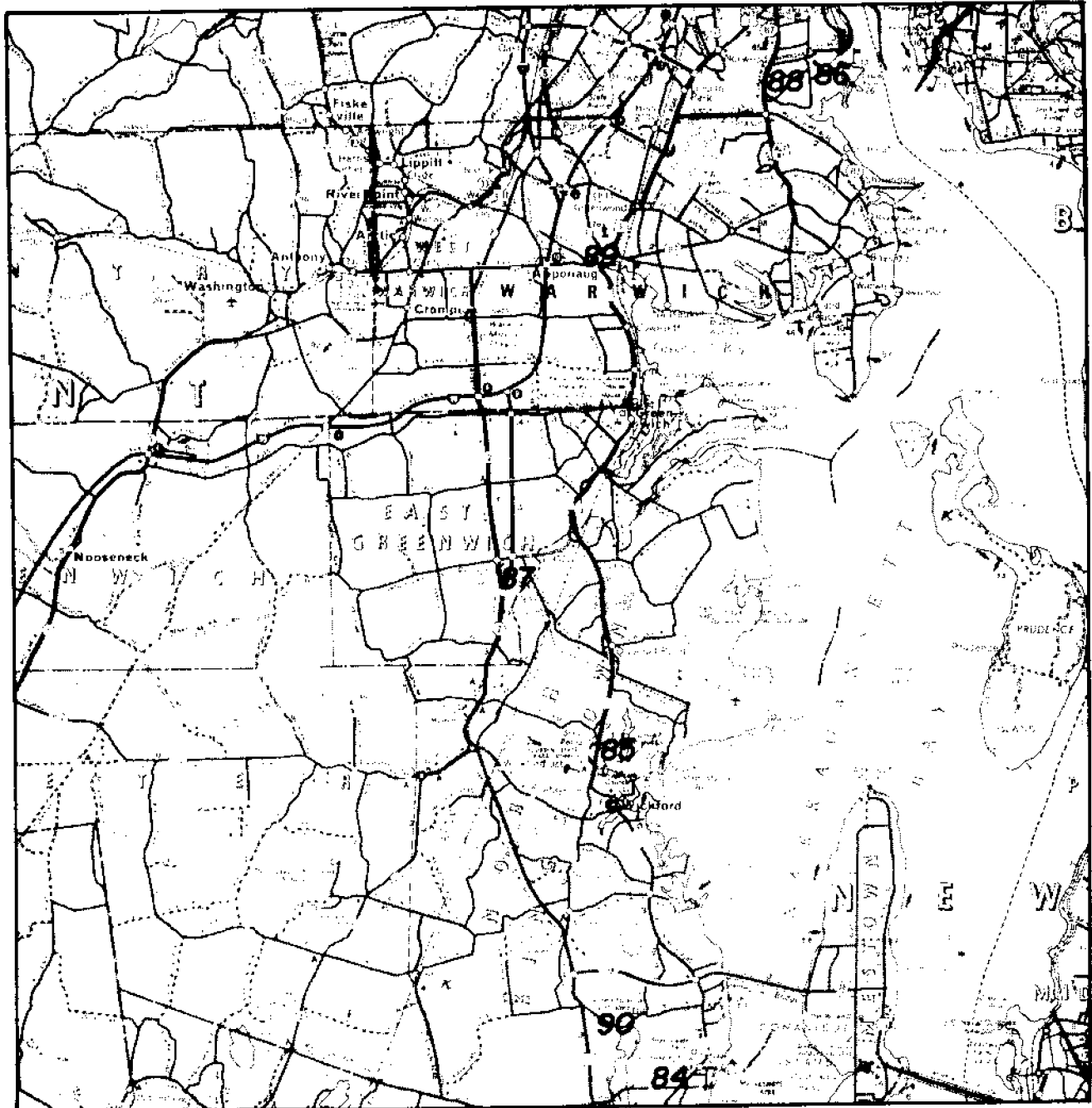
Activity. This large state park, which borders the upper region of the Bay, provides excellent areas for collecting, identifying, and other activities related to marine science. Along the shore one can find boulders of grey conglomerate and sandstone which were deposited by the glaciers 10,000 years ago. The effect of the weathering on these boulders is evident.

Grades. K-12.

Fee. None.

Prior Arrangements. The state park staff should be contacted prior to a visit. Phone 253-7482.





District 7

- 84 Casey Farm
- 85 Marine Fisheries Laboratory
- 86 Saltwater Marsh and Pine Tree Preserve
- 87 Davis Memorial Wildlife Refuge
- 88 Buckeye Brook Marsh
- 89 Kent County YMCA
- 90 Gilbert Stuart Birthplace

- 84 Casey Farm
Boston Neck Road (Rt. 1A),
North Kingstown

Activity. Casey Farm is a working historical farm run by the Rhode Island Society for the Preservation of Antiques. It is open in warmer weather.
Grades. K-12.

Fee. None.
Prior Arrangements. It is recommended that a teacher visit Casey Farm prior to a scheduled visit.

- 85 Marine Fisheries Laboratory
Fowler Street (Wickford),
North Kingstown

Activity. Tours of the marine laboratory last approximately two hours. There is always an ongoing experiment, and a ride on the trawler is given for a demonstration of either dredging or trawling, depending on the season. There is also a slide show on marine life which is geared to the age of the group.

Grades. 7-12.

Fee. None.

Prior Arrangements. Visits are limited to 20 persons per group. Make appointments with either Richard Sisson, senior marine biologist, or Howard Russell, marine biologist. Call the laboratory for reservations. Phone: 295-8818.

- 86 Saltwater Marsh and Pine Tree Preserve
Draper Avenue, Warwick

Activity. Students can make a complete study of a salt marsh and its inhabitants here. Also of interest are pine tree growth and reproduction, erosion control and microscopic still life.

Grades. 5-12.

Fee. None.

Prior Arrangements. None.

Of Special Interest. Nets, collecting jars, etc., should be brought to the site if their use is planned.



87 Davis Memorial Wildlife Refuge
Davisville Road, North Kingstown

Activity. This 100-acre site parallels the Hunt River and contains a flood plain with red maples, an abandoned sandpit with pockets of plant life and an old Indian habitat from which diggings have brought up artifacts from 1500 B.C. The area is excellent for both aquatic and geological studies.

Grades. K-12.

Fee. None.

Prior Arrangements. Three volunteers are available to take groups of 20 around the refuge. They will come to your classroom both before and after the trip. Make arrangements with the R.I. Audubon Society. Phone: 521-1670.

88 Buckeye Brook Marsh
West Shore Road and Draper Avenue,
Warwick

Activity. Flora and fauna can be observed in brook and marsh. The brook passes through open field and meadow land and merges with salt water at one end, forming a salt water estuary. As the brook passes under Warwick Avenue, the effects of pollution can be easily seen.

Grades. 7-12.

Fee. None.

Prior Arrangements. None.

(Of Special Interest. Dip nets, water-testing kits and containers should be brought to the site for collecting purposes.

89 Kent County YMCA
West on Route 117, Warwick

Activity. The many hiking and nature trails which stretch over the 117 acres of woodland provide excellent sites for plant and tree identification and study. Forest vegetation studies could compare this area with the other forests around Rhode Island.

Grades. K-12.

Fee. None.

Prior Arrangements. Contact in advance, Ivan McGlaulin of the Kent County YMCA. Phone: 828-0130

90 Gilbert Stuart Birthplace
Gilbert Stuart Road, North Kingstown

Activity. This is the home of one of America's great artists. There is an old working grist mill and a "bucky" ladder located here.

Grades. K-8.

Fee. \$.50 per person; \$.25 per person in a group.

Prior Arrangements. Notice must be given before arrival. Phone: 294-3001. No more than 25 people may go through the house at one time. The birthplace is open on Saturday through Thursday from 11 a.m. to 3:30 p.m.





Sites of Geologic Interest

Site	District
Aquidneck Island Potpourri Tour	1
Hanging Rock	1
Fort Wetherill	1
North End of Block Island	1
Beavertail	1
Rock Formations under Jamestown Bridge	1
Purgatory Chasm	1
Cliff Walk	1
Trustom Pond Refuge	2
Narragansett Basin Granite	2
Napatree Point	3
Westerly Granite Quarry	3
Barrier Beach and Salt Water Pond	3
Yawgoog Scout Camp	3
Queen's Fort	4
Purgatory Chasm	5
Conklin Lime Quarry	6
Bernon Heights School	6
Diamond Hill State Park	6
Limerock Quarry	6
Furnace Hill Brook	7
Snake Den State Park	7
Soapstone Quarry	7
Glacial Esker, Roger Williams Park	7

Books you may find helpful at any of these sites:

Field Guides to: rocks and minerals and fossils

Rhode Island Geology for the Non Geologist, Alonzo Quinn.

The Rhode Island Department of Natural Resources, 1973, \$.50 per copy.

Minerals of Rhode Island, Clarence E.

Miller, O. Don Hermes ed.,

Department of Geology, University of Rhode Island, 1972



Sites of Historical Interest

Birds Common to the Rhode Island Area

Site	District	Winter Birds
Aquidneck Island Potpourri Tour	1	Cardinal
*Wanton-Lyman-Hazard House	1	Junco
*Trinity Church	1	Sparrow
*Touro Synagogue	1	Chicadee
*Redwood Library	1	Nuthatch
*Old Colony House	1	Woodpecker
*Hunter House	1	
*Edward King House	1	Birds of the Swamp
*Brick Market	1	Herons
Queen's Fort	4	Sparrows
*General Nathanael Greene Homestead	4	Swans
Arcadia State Park	4	Geese
*Eleazer Arnold House	6	Ducks
Slater Park	7	Hawks (Osprey)
*Old Slater Mill	7	Sandpipers
Soapstone Quarry	7	Seagulls
*Roger Williams Spring	7	Birds of the Woods
*Stephen Hopkins House	7	Warbler
*First Baptist Church	7	Sparrow
*John Brown House	7	Virios
The Dame Farm	7	Flycatcher
Casey Farm	9	Towee
Davis Memorial Wildlife Refuge	9	Woodpecker
*Gilbert Stuart Birthplace	9	Nuthatch
		Brown Creeper
		Thrush
		Birds of the Field
		Hawks
		Vultures
		Crows
		Grouse
		Pheasant
		Dove
		Hummingbird
		Flycatchers
		Bluebird
		Catbird

Field Guide Information

Two good field guides for the amateur bird watcher:

Birds of North America: A Guide to Field Identification. Robbins, Brown & Zern. Golden Press.

A Field Guide to the Birds. Roger Tory Peterson. Houghton Mifflin Co.

