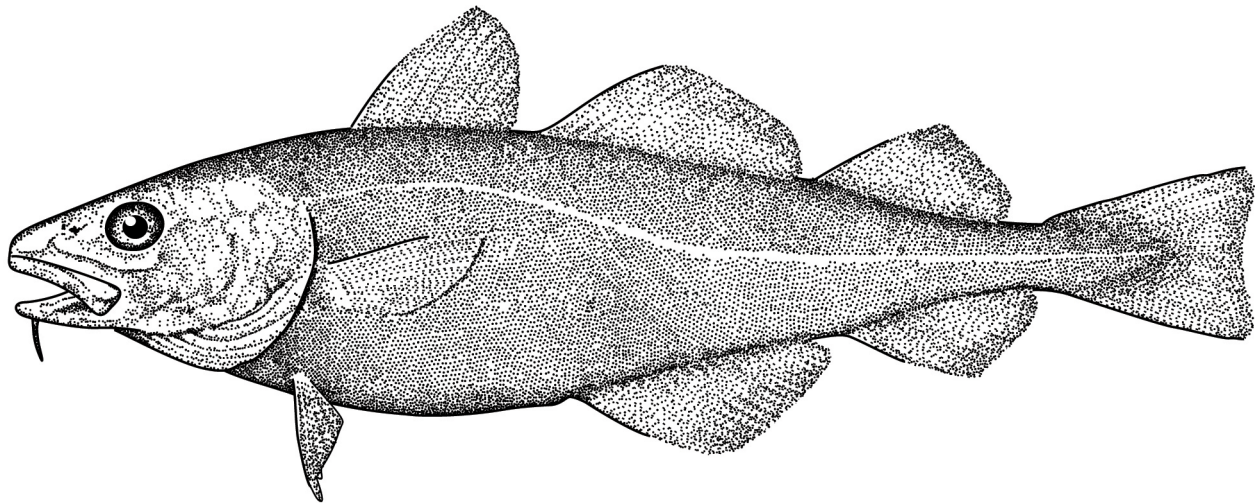


Borrer's Species Checklist for the Isles of Shoals Archipelago



May 2009 Edition

**Meg N. Eastwood, Kipp Quinby,
Robin Hadlock Seeley, Christine Bogdanowicz,
Hal Weeks, and William E. Bemis**

Borrer's Species Checklist for Shoals Marine Laboratory

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INTRODUCTION TO 2009 REVISION

This is the first revision of this checklist of species known from the Isles of Shoals Archipelago since the 1995 edition prepared by Arthur C. Borror and printed and distributed by the Shoals Marine Laboratory (SML). It builds upon earlier versions of the checklist issued in 1978, 1982, 1984 and records of the University of New Hampshire Zoological Laboratory on Appledore from 1928-1940. This revision includes records for more than 1400 species, but many hundreds if not thousands of species have yet to be discovered and recorded at this remarkable and biologically rich location in the southern Gulf of Maine.

This is an unusual checklist for many reasons, beginning with the fact that the Isles of Shoals Archipelago is a relatively small, pristine and easily circumscribed area ideally suited for intensive and detailed biotic surveys of terrestrial, intertidal and subtidal organisms. Second, because SML emphasizes undergraduate training in ecology, and SML students have been essential to the discovery of biological diversity at the Isles of Shoals, this checklist has very broad taxonomic coverage, ranging from cyanobacteria to algae, vascular plants, invertebrates and vertebrates. Many world experts on specific taxa have visited SML and contributed their expertise to the identification of taxa found there. A third unusual aspect of this checklist is that species records have been continuously kept and updated since the founding of SML in 1966. As such, it records many species formerly common at the Isles of Shoals that are rare or even extirpated today. Such long and detailed historical record of species occurrences are very uncommon yet increasingly important as we attempt to understand and monitor the impacts of global climate change and other anthropogenic impacts on the natural world.

This checklist is, of necessity, very different from a modern biodiversity survey that would typically include voucher specimens (or at least voucher photographs) deposited in permanent biological collections and accessible to other researchers. Many records of isolated or single occurrences of taxa recorded during the early days of SML cannot be subjected to independent verification. Still, because of the experience and dedication of the early instructors and students at SML, we choose to retain in this edition records of even single occurrences of taxa whether or not a specimen was retained as a voucher.

Because this checklist is an essential document for many undergraduate credit courses at SML, preparing this revision posed several challenges. First, we needed to assemble and add records of all new species observed at the Isles of Shoals since 1995 and to include, wherever possible, notes about any significant changes in abundance for species already recorded. Second, we needed to update species-level taxonomy using authoritative electronic resources such as ITIS (Integrated Taxonomic Information System; <http://www.itis.gov>) while retaining familiar synonyms known to generations of SML instructors and students. Third, we needed to consider the basic organization of the checklist and whether we could reorganize the list of taxa to reflect major advances in phylogenetic knowledge since 1995. These advances are yielding improved phylogenetic interpretation for many groups of organisms, but these are often incomplete and sometimes conflicting. A checklist of as many different groups as we include here is not an ideal place to address such phylogenetic issues, so, after discussion, we opted to organize the list of species in simpler ways. For this edition, we recognized six major groups using familiar names: Cyanobacteria, Dinoflagellates, Diatoms, Algae, Plants, Fungi, and Animals. Within each of these six groups, we organized taxa above the family level to reflect current phylogenetic interpretations insofar as possible. Below the family level, we typically—although not in all cases—list taxa alphabetically. To make this organization more accessible to users, we include a new table of contents (down to orders) and an index of families and genera. Finally, while a checklist is not a key, SML students and faculty depend on keys in the field and in the lab, so we were sensitive to the need to make the checklist as congruent as possible with keys to regional species currently used in SML courses.

A larger goal that we decided not to pursue in this revision is comprehensive integration with emerging databases such as the Census of Marine Life (<http://www.coml.org/>). For now, the checklist remains a working document that can be revised to serve such purposes in the future. It can be accessed at: http://www.sml.cornell.edu/sml_research_dataarchives.html. New records of species or suggestions for improvements should be submitted by e-mail to sml-checklist@cornell.edu.

Diversity of many groups of organisms present at the Isles of Shoals remains poorly studied, and our knowledge of biological diversity there remains uneven. For example, we have relatively few records of fungi or spiders. The diversity of these organisms is surely underrepresented by our current list. We have yet to begin comprehensive surveys of organisms that are parasites of species listed here, and our knowledge of microbial diversity at the Isles of Shoals remains limited. Other groups that have been the subject of detailed surveys have yet to be integrated into the checklist. For example, Arthur C. Borror surveyed and collected nocturnal Lepidoptera of Appledore, but those records are not included here. Poorly known groups represent opportunities for additional biodiversity survey research, and the additional data sets already available represent relatively straightforward additions to future editions of the checklist. Perhaps the information and arrangement that we present here will inspire such work.

One of the most important roles that the checklist can play is to record information regarding the arrival of invasive species in the southern Gulf of Maine. To that end, we note wherever possible known invasives—particularly marine invasives—with the designation Invasive Species and the first date that they were seen at the Isles of Shoals.

Because SML's facilities are located on Appledore Island, we undoubtedly know more about biodiversity on and adjacent to Appledore than the other islands in the archipelago. It will be interesting in the future to extend surveys to other islands as practical, for there are obvious differences in the abundance of different species of birds, for example, and differences in exposure. For this revision, we follow the range boundaries for the checklist used by Borrer in 1995.

We adopted certain conventions for consistency within the checklist. For example, we capitalize all common names, recognizing that this is not congruent with all stylistic conventions of the cognizant scientific society (e.g., the American Fisheries Society does not capitalize common names of fishes whereas the American Ornithologists' Union capitalizes the common names of birds).

Notes on Organization of Specific Groups of Organisms in this Checklist

Taxa within the major groups Cyanobacteria, Dinoflagellates, Diatoms and Algae are alphabetized in the absence of consensus on their relationships. The taxonomy for Cyanobacteria, Dinoflagellates, and Diatoms was updated according to AlgaeBase (<http://www.algaebase.org/>; accessed online 2008). We thank Arthur Mathieson for updating names and classification of Algae. The update presented here is, with few exceptions, congruent with the Northeast Algal Society (NEAS) key edited by J.R. Sears (2002).

Plants are organized systematically through order according to Cronquist (1988); families and lower taxa are listed alphabetically. This revision includes more than 70 new species of vascular plants thanks to a study by Bill and Virginia Nichols (Nichols and Nichols 2008). We thank Bill Nichols for advice and comments on the section on plants. Nomenclature was revised according to the Flora of North America (1993+), with reference to the USDA PLANTS Database (<http://plants.usda.gov/>; accessed online 2008).

Invertebrates are organized systematically through order and alphabetically for taxa at the family level and below with a few exceptions: Acanthocephala, Trematoda, and Cestoda are arranged systematically through class, but subclasses, orders and below are alphabetized, due to lack of agreement on phylogenetic relationships within these groups. We based our nomenclature and classification of invertebrates on ITIS. The online format of ITIS complements our long-term goal of making this checklist available online. Because ITIS lists taxonomic groups alphabetically rather than systematically, Brusca and Brusca (2003) and the Light and Smith manual (Carlton, 2007) were used to sequence higher taxa (phylum through order). In cases where ITIS and Brusca and Brusca (2003) differed, we followed these references: cnidarians were arranged according to Marques and Collins (2004), ctenophores were arranged according to Mills (1998), and polychaetes were arranged according to Rouse and Fauchald (1997). We thank Larry Harris for comments on invertebrates.

Tunicates were arranged according to Kott (2005). A new vertebrate family is recorded in this revision (at least one painted turtle has been observed on Appledore Island in 2005, 2007 and 2008). Nomenclatural changes were made as needed. The sequence of families of fishes follows Nelson (2006), and is generally congruent with www.FishBase.com (Froese and Pauly, 2008). Several new species of birds were recorded and some notes about current abundance were modified as a result of activities of the SML Banding Station; we thank Sarah Morris for these records. Birds are organized systematically through species according to the American Ornithologists' Union Checklist of North American Birds (<http://www.aou.org/checklist/index.php3>; accessed online 2008). Other groups of vertebrates are organized systematically through family, with genera and species alphabetized.

Arthur C. Borrer, Meg Eastwood, Kipp Quinby, Robin Hadlock Seeley, Hal Weeks, Christine Bogdanowicz, and William E. Bemis
May 2009

PREFACE TO THE 1995 EDITION BY ARTHUR C. BORROR

This checklist represents species collected or observed at the Isles of Shoals and surrounding waters by students and staff of the Shoals Marine Laboratory, as well as many other investigators, including faculty and students from Drew University, Merrimack College, Oneonta College, University of New Hampshire, and Union College courses.

The 1978 edition of the list resulted from efforts dating to the earliest observations at the Laboratory in the summer of 1966 and was limited to species seen during the summer. Major contributors to the 1978 list were SML faculty including J. Anderson, E. Brothers, L. Bush, P. Gilbert, J. Kingsbury, O. Hewitt, L. Pollock, and P. Sze.

The 1982 edition represented a major revision. The 1984 printing added common names, many new species from 1982 and 1983, some species representing rediscovered older records, and minor corrections. As well, in compiling the 1984 list, every effort was made to incorporate records from UNH's Marine Zoological Laboratory at Appledore Island in the summers between 1928 and 1940.

This 1995 edition also represents a major revision, including extensive new ecological notes and taxonomic corrections on algae (A. Mathieson), invertebrates (L. Harris), vascular plants (G. Crow), and birds (S. Morris). I have added indications of taxonomic level throughout the checklist by inserting such words as phylum and class where appropriate. Finally, I've assorted taxa more naturally by kingdom than in earlier editions.

Basis for Classifications Used

Classification of red, green, and brown algae generally follows that of Mathieson and Penniman (1986), South and Hooper (1980) and South (1984) or more recent changes (see references). Some recent taxonomic shifts are indicated in parentheses. I acknowledge A. Mathieson's valuable contributions; his advice and publications have been particularly valuable. I wish also to acknowledge the advice and contributions of P. Brady, M. Dethier, C. George, T. Lee, Chris and Clayton Penniman, J. Prince, E. Sideman, S. Sheldon, and P. Sze.

The list of vascular plants follows the classification and nomenclature of the USDA Nation List of Plant Names (1982). Changes from Fernald (1950) are indicated. Included are species listed by Boden (1977) plus numerous additions. Assistance on identification of land plants was given by T. Andrew, H. Andrews, V. Chisholm, G. Crow, B. Dayton, N. Eyster-Smith, D. Fischer, C. George, L. Kelts, B. Merrill, A. Primack, C. and T. Rawinski, and N. Slack.

Invertebrate classification generally reflects that of Ruppert and Barnes (1994), Brusca and Brusca (1990), Bousfield (1973; amphipods), and recent NMFS Technical Reports (see references). Assistance was give by W. Bullock (parasitic helminthes), C. Reed (bryozoa), D. Campbell (sponges, entoprocta), D. Blezard, M. Lesser, D. Reid, D.A. Smith, and R. Turner (mollusks), H. Howell (copepods), R. Croker, T. Donn, and L. Watling (amphipods), L. Eyster, J. Factor, C. George, L. Harris (Cnidaria, nudibranchs), W. Lambert (tunicates), W. Layton (plankton), W. Lord and E. Raffensperger (insects), L. Pollock, B. Rivest, K. Sebens, C. Walker, and J. Witman (lists of subtidal organisms), and L. Kelts (nematomorphs). For additional aid in identification, see also Smith and Carlton 1975.

E. Brothers, F. Coleman, J. Heiser, H. Howell, P. Levin, P. Sawyer, and H. Weeks contributed to the sections on marine vertebrates.

Many people contributed to the bird list, but I wish to acknowledge in particular observations by D. Abbott, K. Elkins, D. Finch, V. Hebert, D. Holmes, R. Holt, S. Morris, E. Phinney, D. Quinby, T. Richards, L. Ring, R. Smart, and the help of the Audubon Society of New Hampshire.

The Shoals Marine Laboratory has collections of voucher specimens (e.g. algae, mosses, vascular plants, marine invertebrates, moths, and fishes). Further reference specimens of marine algae and moths from the Isles of Shoals are in the UNH Herbarium and Entomological Collection respectively.

Many species of algae and invertebrates have been added after careful observation, keying, and tentative identification by many undergraduate students and graduate assistants at the Shoals Marine Laboratory.

Within taxa, lists of species are alphabetical, except in the Aves, where order follows the 6th edition of the Checklist of North American Birds, American Ornithologists' Union (AOU) (1983).

I've included common names for convenience. Those of algae are names in general usage at the Shoals Marine Laboratory. Common names of vascular plans are mostly from Peterson and McKenny (1986) or Fernald (1950). Those of some grasses and sedges follow Britton and Brown (1913). Common names of invertebrates are from Gosner (1979).

Common names of fish are from Robins et al. (1980) and those of birds from the 1983 AOU checklist and more recent revisions.

Boundaries

Species listed generally are those that occur in intertidal and subtidal regions within a three-mile radius of the Isles of Shoals, with the following exceptions. Algae include drifted specimens, but omit species restricted to the high intertidal, brackish pools (listed in Sze, 1981). The insects include only those that breed below the spring high water mark. Vascular plants are restricted to species recorded from Appledore Island. Cetacea include species seen within range of day cruises from the Isles of Shoals.

The fish and invertebrates collected from commercial trawlers in the vicinity appear in Appendix 2, unless they occur within a three-mile radius of the Isles of Shoals.

Other Lists Available

The Shoals Marine Laboratory also has on file lists of several additional groups of organisms compiled for the Isles of Shoals area. These include:

- Nocturnal Lepidoptera of Appledore Island: 292 identified species exclusive of the Microlepidoptera, each represented by a voucher specimen (A.C. Borrer).
- Hymenoptera of Appledore Island: about 30 species, with voucher specimens (R.A. Morse).
- Benthic Foraminifera of Gosport Harbor, Isles of Shoals (26 species) (D. Collins).

CYANOBACTERIA

Phylum Cyanophyta

Class Cyanophyceae

Order Chroococcales

Family Entophysalidaceae

Entophysalis conferta

Family Microcystaceae

Anacystis sp.

Order Nostocales

Family Rivulariaceae

Calothrix crustacea

Order Oscillatoriales

Family Phormidiaceae

Microcoleus lyngbyaceus

(= *Lyngbya confervoides*).

Family Schizotrichaceae

Schizothrix calcicola

(= *Lyngbya calcicola*).

DINOFLAGELLATES

Phylum Pyrrophyta

Class Dinophyceae

Order Dinophysiales

Family Dinophysiaceae

Dinophysis acuminata

Dinophysis acuta

Order Gymnodiniales

Family Gymnodiniaceae

Gyrodinium sp.

sea water table, June 1986

Order Oxyrrhinales

Family Oxyrrhinaceae

Oxyrrhis marina

high tide pools, pink at high concentrations

Peridinium conicum

Peridinium depressum

Peridinium triquetrum

Prorocentrum micans

Order Peridinales

Family Ceratiaceae

Ceratium fusus

Ceratium longipes

Ceratium tripos

Family Gonyaulacaceae

Alexandrium tamarense

(= *Gonyaulax excavata*).

DIATOMS

Phylum Bacillariophyta

Class Bacillariophyceae

Order Bacillariales

Family Bacillariaceae

Nitzschia closterium

Nitzschia seriata

Class Coscinodiscophyceae

Order Achnanthes

Family Cocconeidaceae

Cocconeis sp.

Order Biddulphiales

Family Biddulphiaceae

Isthmia sp.

Order Chaetocerotales

Family Chaetocerotaceae

Chaetoceros decipiens

Chaetoceros socialis

- Order Coscinodiscales
 - Family Coscinodisceaeae
 - Coscinodiscus sp.**
- Order Lithodesmidales
 - Family Lithodesmiaceae
 - Ditylum brightwellii**
- Order Naviculales
 - Family Berkeleyaceae
 - Berkeleya rutilans**
 - Family Pleurosigmataceae
 - Pleurosigma sp.**
- Order Rhizosoleniales
 - Family Rhizosoleniaceae
 - Rhizosolenia delicatula**
 - Rhizosolenia cf. semispina**
- Order Striatellales
 - Family Striatellaceae
 - Grammatophora marina**
- Order Thalassiosirales
 - Family Skeletonemaceae
 - Skeletonema costatum**
 - Family Thalassiosiraceae
 - Porosira sp.**
 - Thalassiosira sp.**
- Class Fragilariophyceae
 - Order Fragilariales
 - Family Fragilariaceae
 - Asterionella japonica**
 - Order Licmophorales
 - Family Licmophoraceae
 - Licmophora flabellata**
 - Order Rhabdonematales
 - Family Rhabdonemataceae
 - Rhabdonema sp.**

plankton net

(= *Asterionella glacialis* or *Asterionellopsis glacialis*).

ALGAE

Phylum Heterokontophyta

Class Phaeophyceae

Order Chordariales

Family Chordariaceae

Chordaria flagelliformis

Family Corynophylaeaceae

Leathesia difformis

Family Elachistaceae

Elachista fucicola

Order Desmarestiales

Family Desmarestiaceae

Desmarestia aculeata

Desmarestia viridis

Order Dictyosiphonales

Family Dictyosiphonaceae

Dictyosiphon foeniculaceus

Family Punctariaceae

Asperococcus fistulosus

Melanosiphon intestinalis

Punctaria plantaginea

Common, tide pools, on rocks or epiphytic

on rocks or epiphyte on *Fucus* and *Corallina*; summer annual

(includes *E. lubrica*; = *Elachistea fucicola*). common, epiphyte on fucoids, occasionally on foliose seaweeds (*Palmaria*)

Common, subtidal, perennial; collected once at 100' on shells

Common, subtidal, annual, abundant in urchin barrens

tide pools, often epiphytic on *Chordaria*

(= *A. echinatus*). Uncommon, intertidal incorrectly identified as *Delamarea attenuata* from the Shoals intertidal records on Smuttynose and White Islands Uncommon, on rocks or epiphytic

<i>Punctaria tenuissima</i>	(= <i>Desmotrichum undulatum</i> , <i>D. balticum</i>). Uncommon, epiphyte; Cedar and White Islands
Family Striariaceae	
<i>Isthmoplea sphaerophora</i>	Uncommon, epiphyte on <i>Ascophyllum</i> ; intertidal on Cedar and Appledore Islands
Order Ectocarpales	
Family Ectocarpaceae	
<i>Ectocarpus fasciculatus</i>	Common, epiphyte on fucoids and kelps; Smuttynose and Star Islands
<i>Ectocarpus siliculosus</i>	(includes <i>E. confervoides</i> , <i>E. dasycarpus</i> & <i>E. penicillatus</i>). Common, epiphyte
<i>Giffordia granulosa</i>	Uncommon, epiphyte; Appledore Island only
<i>Laminariocolax tomentosoides</i>	(= <i>Ectocarpus tomentosoides</i>). Common, epiphyte on kelp; Smuttynose Island
<i>Mikrosyphar porphyrae</i>	Occasional, epiphyte on <i>Porphyra</i> spp.
<i>Pylaiella littoralis</i>	Common, epiphyte on fucoids, particularly within eutrophic habitats during spring
<i>Spongonema tomentosum</i>	(= <i>Ectocarpus tomentosus</i>). Epiphyte on fucoids
Family Lithodermataceae	
<i>Pseudolithoderma extensum</i>	(= <i>Lithoderm extensum</i>). Common, on subtidal rocks
Family Myrionemataceae	
<i>Ascocyclus distromaticus</i>	Rare, epiphyte
<i>Myrionema corunnae</i>	Common, epiphyte on kelps
<i>Myrionema strangulans</i>	Common, epiphyte on ulvoid greens
<i>Protectocarpus speciosus</i>	Epiphyte on fucoids
<i>Ulonema rhizophorum</i>	(South & Hooper include the plant within <i>Myrionema strangulans</i>). Common, endophyte in <i>Dumontia contorta</i>
Family Ralfsiaceae	
<i>Ralfsia verrucosa</i>	Common, tide pools, perennial, true species
Order Fucales	
Family Fucaceae	
<i>Ascophyllum nodosum</i>	Common, mid intertidal, sheltered and semi-exposed shores
<i>Fucus distichus</i> ssp. <i>anceps</i>	grows as short tufts on mid intertidal ledges of exposed shores, often on barnacles; reproduces during late summer (= <i>F. filiformis</i> in Taylor, 1957). grows as short tufts in high intertidal pools; reproduces in winter
<i>Fucus distichus</i> ssp. <i>distichus</i>	(= <i>F. edentatus</i> in Taylor, 1957). low intertidal exposed shores; often stunted in most exposed sites; reproduces in spring and fall
<i>Fucus distichus</i> ssp. <i>edentatus</i>	(= <i>Fucus evanescens</i>). subtidal in protected areas; reproduces in spring and fall
<i>Fucus distichus</i> ssp. <i>evanescens</i>	intertidal at upper limit of rockweeds; often stunted in most exposed sites; reproduces in late summer
<i>Fucus spiralis</i>	mid intertidal in semi-protected areas; reproduces in spring and summer.
<i>Fucus vesiculosus</i>	
Order Laminariales	
Family Alariaceae	
<i>Alaria esculenta</i>	Feather Kelp. Common, low intertidal, shallow subtidal of exposed shores
Family Chordaceae	
<i>Chorda filum</i>	Devil's Shoelace. Uncommon, subtidal, perennial
Family Halosiphonaceae	
<i>Halosiphon tomentosus</i>	Devil's Shoelace (= <i>Chorda tomentosa</i>). Uncommon, subtidal, annual
Family Laminariaceae	
<i>Agarum clathratum</i>	(= <i>Agarum cribrosum</i>). Common, subtidal, often dominant in urchin barrens
<i>Laminaria digitata</i>	Finger or Digitate Kelp. low intertidal, shallow subtidal, semi-exposed shores
<i>Saccharina latissima</i>	Devil's Apron (= <i>Laminaria saccharina</i>). low intertidal, subtidal; less tolerant of wave exposure than <i>L. digitata</i>
<i>Saccharina longicuris</i>	Long-Stemmed Kelp (= <i>Laminaria longicuris</i> ; an ecotype of

	<i>Saccorhiza dermatodea</i>	<i>Saccarina latissima</i> by some authors). low intertidal, subtidal, most common in sheltered sites Oarweed. Occasional, low intertidal, subtidal, annual; flat stipe and discoid holdfast
Order Scytosiphonales		
Family Scytosiphonaceae	<i>Petalonia fascia</i>	(see <i>Ralfsia borneti</i> & <i>R. clavata</i> below). Common, intertidal, annual, often in tide pools, on rocks or epiphytic
	<i>Petalonia zosterifolia</i>	Rare, intertidal on rocks or epiphytic; Smuttynose and Star Islands
	<i>Ralfsia borneti</i>	(this plant and <i>Ralfsia clavata</i> both represent life history stages of <i>Petalonia fascia</i> and/or <i>Scytosiphon lomentaria</i> var. <i>lomentaria</i>). Common, tide pools, occasionally epiphytic
	<i>Scytosiphon lomentaria</i> var. <i>lomentaria</i>	Common, tide pools, on rocks, occasionally epiphytic, spring/summer annual
Order Sphacelariales		
Family Sphacelariaceae	<i>Cladostephus spongiosus</i> f. <i>verticillatus</i>	(= <i>C. verticillatus</i>). only known from one record, Smuttynose Island
	<i>Sphacelaria cirrosa</i>	Common, epiphyte on fucoids
	<i>Sphacelaria fusca</i>	Uncommon, low intertidal zone; Smuttynose Island
Phylum Rhodophyta		
Class Rhodophyceae		
Subclass Bangiophycidae		
Order Bangiales		
Family Bangiaceae	<i>Bangia fuscopurpurea</i>	(Formerly listed as <i>B. atropurpurea</i> , a freshwater taxon). Common, in splash zone in winter and spring
	<i>Porphyra amplissima</i>	newly distinguished from <i>P. miniata</i> ; Smuttynose Island only
	<i>Porphyra leucosticta</i>	Uncommon, low intertidal and shallow subtidal, spring, summer
	<i>Porphyra linearis</i>	(= <i>P. umbilicalis</i> f. <i>linearis</i>). Occasional, high intertidal rocks; Smuttynose Island and Star Island
	<i>Porphyra miniata</i>	Occasional, low intertidal/subtidal rocks
	<i>Porphyra umbilicalis</i>	Common, mid-low intertidal zone, most abundant at exposed sites
Order Erythropeltidales		
Family Erythrotrichiaceae	<i>Erythrotrichia discigera</i> var. <i>discigera</i>	Uncommon epiphyte; Duck Island only
	<i>Erythrotrichia carnea</i>	Common epiphyte
	<i>Porphyrostromium ciliare</i>	(= <i>Bangia ciliare</i> , <i>Erythrotrichia ciliaris</i>). Epiphyte on large algae
Order Porphyridiales		
Family Porphyridiales	<i>Stylonema alsidii</i>	(= <i>Goniotrichum alsidii</i>). Uncommon epiphyte; open coastal sites of Cedar, Lunging, and Malaga Islands
Subclass Florideophycidae		
Order Acrochaetiales		
Family Acrochaetiaceae	<i>Audouinella alariae</i>	(= <i>Kylinia alariae</i>). Common, on <i>Alaria esculenta</i> epiphyte on macroalgae
	<i>Audouinella membranacea</i>	(= <i>Rhodochorton purpureum</i>). Common, shaded vertical sites, often with <i>Plumaria plumosa</i>
	<i>Audouinella purpurea</i>	(= <i>Colaconema secundata</i> , <i>Kylinia secundata</i> , <i>K. virgatula</i>). Epiphyte on macroalgae
	<i>Audouinella secundata</i>	
Order Ahnfeltiales		
Family Ahnfeltiaceae	<i>Ahnfeltia plicata</i>	tetrasporangial phase is crust known as <i>Porphyrodiscus simulans</i> . sand-impacted or disturbed low intertidal, subtidal

Order Bonnemaisoniales	
Family Bonnemaisoniaceae	
<i>Bonnemaisonia hamifera</i>	(= <i>Asparagopsis hamifera</i> ; tetrasporangial phase known as <i>Trilliella intricata</i>). in drift or entangled
Order Ceramiales	
Family Ceramiaceae	
<i>Aglaothamnion hookeri</i>	(= <i>Callithamnion hookeri</i>). rare, subtidal, on rocks; Appledore Island only
<i>Antithamnionella floccosa</i>	(= <i>Antithamnion floccosum</i>). Occasional, subtidal, on rocks, shells, epiphytic
<i>Callithamnion tetragonum</i>	(= <i>C. baileyi</i>). Common, subtidal, on rocks and epiphytic
<i>Ceramium deslongchampii</i>	(= <i>C. deslongchampii</i> var. <i>hooperi</i>). Uncommon, low intertidal, wooden pilings and rocks
<i>Ceramium virgatum</i>	(includes <i>C. rubrum</i> , <i>C. rubriforme</i> , <i>C. nodulosum</i> and <i>C. areschougii</i>). Common, epiphyte and on rocks, low intertidal, shallow subtidal
<i>Plumaria plumosa</i>	(= <i>P. elegans</i>). Common, under shaded vertical exposed sites, often found with <i>Audouinella purpurea</i>
<i>Pterothamnion plumula</i>	(= <i>Antithamnion plumula</i> in Taylor 1957). Common, subtidal; Cedar and Smuttynose Islands only
<i>Ptilota serrata</i>	Common, subtidal
<i>Scagelia pylaisaei</i>	(= <i>Antithamnion boreale</i> , <i>A. pylaisaei</i> , <i>A. americanum</i>). Occasional, dredged at 100' in 1988
<i>Spermothamnion repens</i>	(= <i>S. turneri</i>). Appledore Island only
Family Delesseriaceae	
<i>Membranoptera alata</i>	(includes <i>M. denticulata</i>). Common, subtidal, often epiphytic and on rocks
<i>Pantoneura baerii</i>	Uncommon, subtidal; Appledore Island only
<i>Phycodrys rubens</i>	Oak Leaf. Common, subtidal, on rocks
Family Rhodomelaceae	
<i>Neosiphonia harveyi</i>	(= <i>Polysiphonia harveyi</i> , <i>P. novae-angliae</i>). Common, shallow subtidal, epiphyte on diverse macroalgae
<i>Polysiphonia flexicaulis</i>	occasional, intertidal, shallow subtidal epiphyte or on rocks
<i>Polysiphonia fucoides</i>	(= <i>Polysiphonia nigrescens</i>). Common, subtidal
<i>Polysiphonia nigra</i>	subtidal; by Star Island only
<i>Polysiphonia stricta</i>	(= <i>Polysiphonia urceolata</i>). Common, low intertidal, subtidal, at exposed sites
<i>Rhodomela confervoides</i>	Common, subtidal, low intertidal rocks
<i>Vertebrata lanosa</i>	(= <i>Polysiphonia lanosa</i>). Common, "hemiparasite" on injured <i>Ascophyllum nodosum</i>
Order Corallinales	
Family Corallinaceae	
<i>Clathromorphum circumscriptum</i>	(= <i>Phymatolithon evanescens</i>). subtidal, low intertidal pools
<i>Corallina officinalis</i>	Common, tide pools and shallow subtidal
<i>Leptophytum foecundum</i>	(= <i>Lithothamnium foecundum</i>). Common, subtidal
<i>Leptophytum laeve</i>	(= <i>Lithothamnium laeve</i>). Common, subtidal
<i>Lithothamnion glaciale</i>	Common, subtidal
<i>Phymatolithon laevigatum</i>	Common, subtidal
<i>Phymatolithon lamii</i>	(= <i>Phymatolithon rugulosum</i>). Uncommon, subtidal; Smuttynose and Malaga Islands only
<i>Phymatolithon lenormandii</i>	(= <i>Lithothamnium lenormandii</i>). Common, intertidal, shallow subtidal, on mussels and rocks
<i>Pneophyllum fragile</i>	(= <i>Fosliella lejolisii</i> , <i>Melobesia lejolisii</i>). Occasional, epiphyte on coarse algae
<i>Titanoderma corallinae</i>	(= <i>Lithophyllum corallinae</i> , <i>Dermatolithon corallinae</i>). Epiphyte on <i>Corallina officinalis</i>
<i>Titanoderma pustulatum</i>	(= <i>Lithophyllum pustulatum</i> , <i>Dermatolithon pustulatum</i> , <i>Lithophyllum macrocarpum</i>). Epiphyte on <i>Chondrus</i> and <i>Mastocarpus</i>
Order Gigartinales	
Family Choreocolaceae	
<i>Ceratocolax hartzii</i>	Parasite on <i>Phyllophora truncata</i> and <i>Coccotylus truncatus</i>

<i>Choreocolax polysiphoniae</i>	Common, exposed mid intertidal, epiphyte on <i>Polysiphonia lanosa</i>
<i>Harveyella mirabilis</i> Family Corallinaceae	Uncommon, parasite on <i>Rhodomela confervoides</i>
<i>Gloiosiphonia capillaris</i> Family Cystocloniaceae	Uncommon, intertidal
<i>Cystoclonium purpureum</i> <i>Fimbrifolium dichotomum</i>	Common, shallow subtidal, on rocks or epiphytic (= <i>Rhodophyllis dichotoma</i>). Occasional, deep subtidal. 100' trawled
Family Dumontiaceae	
<i>Dumontia contorta</i>	(= <i>D. incrassata</i>). Common, tide pools, winter/spring annual
Family Gigartinaceae	
<i>Chondrus crispus</i>	Irish Moss. conspicuous, lower shore
Family Kallymeniaceae	
<i>Callocolax neglectus</i> <i>Callophyllis crispata</i>	occasional parasite on <i>Callophyllis cristata</i> (= <i>Euthora cristata</i>). Common, subtidal rocks, epiphyte on <i>Chondrus crispus</i>
Family Petrocelidaceae	
<i>Mastocarpus stellatus</i>	(formerly <i>Gigartina stellata</i> , tetrasporangial phase is crust known as <i>Petrocelis cruenta</i>). grows with <i>Chondrus crispus</i> but is more common on vertical surfaces, absent in extreme exposure
Family Peyssoneliaceae	
<i>Peyssonnelia rosenvingei</i>	occasional, subtidal; a fleshy red crust with light striations and limited calcification; Smuttynose and Malaga Islands only
Family Phyllophoraceae	
<i>Coccotylus truncatus</i> <i>Erythrodermis (Phyllophora) traillii</i> <i>Gymnogongrus crenulatus</i>	(= <i>P. brodiaei</i> , <i>P. truncata</i>). Common, subtidal (= <i>Phyllophora traillii</i>). low intertidal with sponges (= <i>G. norvegicus</i>). Uncommon, subtidal pebbles, often silt-covered
<i>Phyllophora pseudoceranoides</i>	(= <i>P. membranifolia</i>). Common, subtidal
Family Polyidaceae	
<i>Polyides rotundus</i>	(= <i>Polyides caprinus</i>). Common, subtidal, often in sandy areas
Order Hildenbrandiales	
Family Hildenbrandiaceae	
<i>Hildenbrandia rubra</i>	(= <i>H. prototypus</i>). Common, mid-low intertidal, often in tide pools; forming a thin orange-red crust
Order Nemaliales	
Family Liagoraceae	
<i>Nemalion helminthoides</i>	(= <i>Nemalion multifidum</i>). Uncommon, high intertidal, midsummer; Smuttynose, Star, and Boon Islands
Order Palmariales	
Family Palmariaceae	
<i>Devaleraea ramentacea</i>	(= <i>Halosaccion ramentaceum</i>). Common, on exposed low intertidal rocks; an indicator of exposed habitats
<i>Halosaccicolax kjellmanii</i>	Rare, parasite on Palmaria and Devaleraea; Smuttynose Island only
<i>Palmaria palmata</i>	(= <i>Rhodymenia palmata</i>). Common, exposed low intertidal, shallow subtidal, epiphytic and on rocks
<i>Rhodophysema elegans</i>	(= <i>Rhododermis elegans</i>). Uncommon, epiphyte
Order Rhodymeniales	
Family Lomentariaceae	
<i>Lomentaria orcadensis</i>	occasional, shallow subtidal, on shells and rocks
Phylum Chlorophyta	
Class Chlorophyceae	
Order Prasiolales	
Family Prasiolaceae	
<i>Prasiola stipitata</i>	Common, high intertidal zone below seabird colonies; a "guano-trophic" species

Class Ulvophyceae

Order Acrosiphonales

Family Acrosiphoniaceae

Acrosiphonia arcta

Acrosiphonia spinescens

Chlorochytrium moorei

Codiolum gregarium

Codiolum petrocelis

Codiolum pusillum

Urospora penicilliformis

Urospora wormskioldii

Order Cladophorales

Family Cladophoraceae

Chaetomorpha aerea

Chaetomorpha brachygona

Chaetomorpha melagonium

Chaetomorpha minima

Cladophora albida

Cladophora rupestris

Cladophora sericea

Rhizoclonium riparium

Rhizoclonium tortuosum

Order Codiales

Family Bryopsidaceae

Bryopsis plumosa

Derbesia marina

Family Codiaceae

Codium fragile* subsp. *tomentosoides

(= *Spongomorpha arcta*). Common, intertidal, often in spring (= *Spongomorpha spinescens*; some authors include this taxon within *Acrosiphonia* (*Spongomorpha arcta*). Common, intertidal, particularly in late spring and summer

(= sporophyte stage of *Acrosiphonia* (*Spongomorpha*) and other filamentous green algae). in the mucilaginous sheaths of the colonial diatom *Berkeleya rutilans*

Codiolum gregarium, *C. petrocelis*, and *C. pusillum* may be stages in the life cycle of green algae of five other genera (South, 1984). *Codiolum petrocelis* is common in *Mastocarpus stellatus*, while *C. gregarium* and *C. pusillum* are common on rocks in the splash zone, particularly during winter and spring.

see note about *Codiolum gregarium*

see note about *Codiolum gregarium*

sporophyte = *Codiolum gregarium* / *C. pusillum*; common, splash zone, especially during winter and spring

(includes *U. collabens*). sporophyte = *Codiolum pusillum* / *C. gregarium*; common in splash zone particularly during winter and spring

Uncommon, as attached filaments in tide pools. Unattached filaments of *Chaetomorpha aerea* become entangled commonly in intertidal and subtidal habitats, and have been known previously as *Chaetomorpha linum*. *Chaetomorpha linum* is currently considered an ecad of *C. aerea*.

(sometimes misidentified as *C. cannabin*). Uncommon, forms entangled filaments

Common as attached filament, low tide pools. Unattached filaments of *C. melagonium* are moderately abundant entangled in intertidal and subtidal habitats, and have been known previously as *Chaetomorpha picquotiana* (= *C. atrovirens*). *Chaetomorpha picquotiana* is currently considered an ecad of *C. melagonium*.

Rare, epiphyte

(includes *Cladophora glaucescens*, *C. magdalenae* and *C. refracta*). Uncommon, tide pools; whitish green in color

moderately common, low tide pools at exposed sites (includes *Cladophora flexuosa*, *C. glaucescens*, *C. gracilis*, *C. refracta* and *C. rudolphiana*). Common, tide pools

(some authors include *R. tortuosum* as a growth form of *R. riparium*). moderately common, high tide pools, growing as entangled populations.

(as noted above, some authors include this within *R. riparium*). entangled in *Chondrus crispus*, *Mastocarpus stellatus*

Uncommon, warm tide pools, summer

(= sporophyte generation of the saccate gametophyte *Halicystis ovalis*). Uncommon, subtidal

attached subtidally in Babb's Cove since 1983; by 1985 spread between transects 26 and 5; by 1986 spread along Star Island side of Gosport Harbor and into low intertidal pools on Duck Island and White Island, by 1994 recorded from all islands except Cedar (see Mathieson et al. 2003)

Order Klebsormidiales	
Family Klebsormidiaceae	
<i>Stichococcus marinus</i>	Uncommon, epiphyte
Order Ulotrichales	
Family Ulotrichaceae	
<i>Ulothrix flacca</i>	Common, epiphytic and on rocks in high intertidal, winter/spring
<i>Ulothrix speciosa</i>	(South and Hooper include this taxon in <i>Ulothrix flacca</i> ; others refer to the plant as <i>Urospora speciosa</i>). Common, on fucoids in upper intertidal
Order Ulvales	
Family Monostromataceae	
<i>Blidingia minima</i>	(= <i>Enteromorpha micrococca</i> , <i>E. marginata</i> , <i>E. minima</i>). Common, high intertidal zone, often in eutrophic habitats
<i>Gayralia oxysperma</i>	(= <i>Monostroma oxyspermum</i> , <i>M. orbiculatum</i> , <i>Ulvaria oxysperma</i>). Uncommon, summer; tolerant of low salinities
<i>Gomontia polyrhiza</i>	(= <i>Codiolum polyrhiza</i> , <i>Eugomontia sacculata</i>). Occasional, in old bivalve shells; probably represents a life history phase (Kornmann, 1959, 1960)
<i>Monostroma grevillei</i>	Common in spring and winter, intertidal
<i>Protomonostroma undulatum f. pulchrum</i>	(= <i>Monostroma pulchrum</i>). Common late spring and summer, low intertidal or shallow subtidal, epiphyte, often on <i>Chondrus crispus</i>
Family Ulvaceae	
<i>Capsosiphon fulvescens</i>	salt marsh species that is very tolerant to reduced salinities; rarely found in "brackish" tide pools; needs verification
<i>Percursaria percursa</i>	Uncommon, high tide pools
<i>Ulva clathrata</i>	(= <i>Enteromorpha clathrata</i>), tide pools
<i>Ulva compressa</i>	(= <i>Enteromorpha compressa</i> , <i>E. intestinalis</i> ssp. <i>compressa</i>). Uncommon, mid-low intertidal
<i>Ulva flexuosa</i> ssp. <i>paradoxa</i>	(includes <i>Enteromorpha flexuosa</i> and <i>E. plumosa</i>). Occasional, tide pools
<i>Ulva intestinalis</i>	(= <i>Enteromorpha intestinalis</i>). Common, tide pools
<i>Ulva lactuca</i>	Common, low tide pools, shallow subtidal
<i>Ulva linza</i>	(= <i>Enteromorpha linza</i>). Common, low intertidal, subtidal, on rocks and epiphytic
<i>Ulva prolifera</i>	(includes <i>Enteromorpha prolifera</i> and <i>E. torta</i>). Common, tide pools
<i>Ulvaria obscura</i>	(= <i>Monostroma fuscum</i>). Common, low intertidal and shallow subtidal habitats; turns black on drying due to high amounts of polyphenols
Family Ulvellaceae	
<i>Acrochaete viridis</i>	(often cited as <i>Entocladia viridi</i>). Common, endophyte in foliose algae
<i>Epicladia flustrae</i>	(= <i>Entocladia flustrae</i>). Common, on hydroids
<i>Pringsheimiella scutata</i>	Uncommon, epiphyte on ulvoid algae
<i>Pseudendoclonium submarinum</i>	(= <i>Protoderma marinum</i>). Common, intertidal; fleshy crust

PLANTS

Division Hepaticophyta (liverworts)

 Class Hepaticopsida

 Order Jungermanniales

 Family Geocalycaceae

Lophocolea heterophylla

Boden Trail

Division Bryophyta (mosses)

 Class Bryopsida

 Order Bryales

 Family Aulacomniaceae

Aulacomnium palustre

relatively dry rock ledges in Celia Thaxter Way just west of the gate, and fern tussocks in Northern Valley

 Family Bryaceae

<i>Bryum argenteum</i>	Sidewalk Moss. cracks of rocks by Hamilton House
Family Mniaceae	
<i>Mnium hornum</i>	Horn Calcareous Moss. Common, widespread
<i>Plagiomnium cuspidatum</i>	(= <i>Mnium cuspidatum</i>). moist rich soil, Boden Trail
Order Dicranales	
Family Dicranaceae	
<i>Dicranum flagellare</i>	Broom Moss. clumps of fern, Northern Valley
<i>Dicranum scoparium</i>	Broom Moss. moist rich soil, Boden Trail
<i>Ceratodon purpureus</i>	exposed, dry waste areas east of Founders Hall
Order Hypnales	
Family Amblystegiaceae	
<i>Amblystegium sp.</i>	under jewelweed, Boden Trail
Family Brachytheciaceae	
<i>Brachythecium sp.</i>	relatively dry rock ledges
<i>Eurhynchium pulchellum</i>	
Order Polytrichales	
Family Polytrichaceae	
<i>Atrichum sp.</i>	moist rich soil beneath arrowwoods, Well Trail
<i>Polytrichum commune</i>	Haircap Moss. moist rich soil, rocks, Well Trail
Division Pteridophyta (ferns)	
Class Equisetopsida	
Order Equisetales	
Family Equisetaceae	
<i>Equisetum arvense</i>	Common Horsetail.
Class Filicopsida	
Order Ophioglossales	
Family Ophioglossaceae	
<i>Botrychium dissectum</i>	Grape Fern. well-drained sites east of Crystal Lake
Order Polypodiales	
Family Dennstaedtiaceae	
<i>Dennstaedtia punctilobula</i>	
<i>Pteridium aquilinum</i>	Eastern Hayscented Fern. (Nichols and Nichols 2008, in press)
Family Dryopteridaceae	Western Brackenfern.
<i>Athyrium filix-femina var. angustum</i>	Lady Fern (= <i>Athyrium filix-femina</i>).
<i>Dryopteris carthusiana</i>	Spinulose Wood Fern (= <i>Dryopteris spinulosa</i>).
<i>Onoclea sensibilis</i>	Sensitive Fern.
Family Osmundaceae	
<i>Osmunda cinnamomea</i>	Cinnamon Fern.
<i>Osmunda regalis</i>	Royal Fern. rare, low swales
Family Polypodiaceae	
<i>Polypodium virginianum</i>	Rock Polypody.
Family Thelypteridaceae	
<i>Thelypteris palustris</i>	Marsh Fern.
Division Coniferophyta (conifers)	
Class Pinopsida	
Order Pinales	
Family Cupressaceae	
<i>Juniperus communis var. depressa</i>	Common Juniper.
<i>Juniperus virginiana</i>	Eastern Red Cedar.
Division Magnoliophyta (flowering plants)	
Class Magnoliopsida (dicotyledons)	
Subclass Magnoliidae	
Order Ranunculales	
Family Ranunculaceae	
<i>Anemone quinquefolia</i>	Wood Anemone.
<i>Aquilegia canadensis</i>	Red Columbine.
<i>Clematis jouniana</i>	Traveller's Joy. vine, 3 sites north of central valley, perhaps persisting from Celia Thaxter's garden; September

<i>Ranunculus abortivus</i>	Littleleaf Buttercup. base of large sumac on Apple Tree Trail, blooming June
<i>Ranunculus acris</i>	Tall Buttercup. meadows, common
<i>Ranunculus bulbosus</i>	Bulbous Buttercup.
<i>Ranunculus repens</i>	Creeping Buttercup.
<i>Ranunculus sceleratus</i>	Cursed Buttercup. (Nichols and Nichols 2008)
Order Papaverales	
Family Papaveraceae	
<i>Chelidonium majus</i>	Celandine.
Subclass Hamamelidae	
Order Urticales	
Family Cannabaceae	
<i>Humulus lupulus</i>	Common Hops (listed by Boden, 1977 as <i>H. japonicus</i>). persists by Celia Thaxter's Garden
Family Ulmaceae	
<i>Ulmus americana</i>	American Elm. one group west of hotel reservoir
Family Urticaceae	
<i>Urtica dioica</i>	Stinging Nettle.
<i>Urtica dioica ssp. gracilis</i>	California Nettle (= <i>Urtica procera</i>). south of Palmer-Kinne Lab
Order Myricales	
Family Myricaceae	
<i>Morella pensylvanica</i>	Northern Bayberry (= <i>Myrica pensylvanica</i>). Common on open ledges
Order Fagales	
Family Betulaceae	
<i>Betula papyrifera</i>	Paper Birch. near large maple by Crystal Lake
Subclass Caryophyllidae	
Order Caryophyllales	
Family Amaranthaceae	
<i>Amaranthus retroflexus</i>	Pigweed. roads, central valley, late summer
Family Caryophyllaceae	
<i>Cerastium fontanum ssp. vulgare</i>	Mouse-ear Chickweed (= <i>Cerastium vulgatum</i>).
<i>Cerastium tomentosum</i>	Snow in Summer. old foundations
<i>Moehringia lateriflora</i>	Grove Sandwort.
<i>Sagina procumbens</i>	Birdeye Pearlwort.
<i>Silene dioica</i>	Red Catchfly. (Nichols and Nichols 2008)
<i>Silene latifolia ssp. alba</i>	Evening Lychnis (= <i>Lychnis alba</i>).
<i>Spergularia rubra</i>	Red Sandspurrey.
<i>Spergularia salina</i>	Salt Sandspurry (= <i>Spergularia marina</i>). rocks near shore, August
<i>Stellaria graminea</i>	Grass-like Starwort.
<i>Stellaria media</i>	Common Chickweed.
Family Chenopodiaceae	
<i>Atriplex prostrata</i>	Orache (= <i>Atriplex patula</i>).
<i>Chenopodium album</i>	Lamb's Quarters.
<i>Chenopodium glaucum</i>	Oakleaf Goosefoot. wet meadows, early August
<i>Chenopodium rubrum</i>	Red Goosefoot. wet meadows, early August
<i>Salicornia depressa</i>	Glasswort (= <i>Salicornia europaea</i>).
<i>Salsola kali</i>	Russian Thistle. (confirmed by Nichols and Nichols 2008)
<i>Suaeda maritima</i>	Annual Sea-Blite. shore-line rock crevices
Family Portulacaceae	
<i>Portulaca oleracea</i>	Common Purslane.
Order Plumbaginales	
Family Plumbaginaceae	
<i>Limonium carolinianum</i>	Lavender Thrift. (Nichols and Nichols 2008)
Subclass Dilleniidae	
Order Theales	
Family Clusiaceae	
<i>Hypericum boreale</i>	Northern St. Johnswort. (Nichols and Nichols 2008)
<i>Hypericum canadense</i>	Canadian St. Johnswort.
<i>Hypericum perforatum</i>	Common St. Johnswort.

<i>Triadenum virginicum</i>	Virginia Marsh St. Johnswort. (Nichols and Nichols 2008)
Order Malvales	
Family Malvaceae	
<i>Malva neglecta</i>	Common Mallow. roadways
Order Violales	
Family Violaceae	
<i>Viola lanceolata</i>	Lanceleaf Violet. formerly in wet depressions
<i>Viola sororia</i>	Common Blue Violet. (Nichols and Nichols 2008)
Order Salicales	
Family Salicaceae	
<i>Populus alba</i>	White Poplar. persists by Utility Building
<i>Populus tremuloides</i>	Trembling Aspen.
Order Capparales	
Family Brassicaceae	
<i>Armoracia rusticana</i>	Horseradish.
<i>Barbarea vulgaris</i>	Winter Cress.
<i>Brassica nigra</i>	Black Mustard. gravel, cobbles
<i>Cakile edentula</i>	American Searocket.
<i>Capsella bursa-pastoris</i>	Shepard's Purse.
<i>Hesperis matronalis</i>	Dames Rocket. (Nichols and Nichols 2008)
<i>Lepidium ruderalis</i>	Roadside Pepperweed.
<i>Lepidium virginicum</i>	Poorman's Pepper.
<i>Raphanus raphanistrum</i>	Wild Radish. beaches, cobbles
<i>Rorippa palustris</i>	Bog Yellowcress. wet meadows, northern valley
<i>Sisymbrium altissimum</i>	Tall Tumblemustard. (Nichols and Nichols 2008)
<i>Sisymbrium officinale</i>	Hedge Mustard.
Order Ericales	
Family Ericaceae	
<i>Gaylussacia baccata</i>	Black Huckleberry. dry roadsides near Commons
<i>Lyonia ligustrina</i>	Maleberry. low valley, south of Bartels Hall
<i>Vaccinium angustifolium</i>	Low Sweet Blueberry. along Marginal Way, May
<i>Vaccinium corymbosum</i>	Highbush Blueberry. in valley east of Bartels Hall
Order Primulales	
Family Primulaceae	
<i>Anagallis arvensis</i>	Scarlet Pimpernel.
<i>Glaux maritima</i>	Sea Milkwort. (confirmed by Nichols and Nichols 2008)
<i>Trientalis borealis</i>	Starflower.
Subclass Rosidae	
Order Rosales	
Family Crassulaceae	
<i>Hylotelephium telephium</i>	Witch's Moneybags (= <i>Sedum purpureum</i>).
<i>Sedum acre</i>	Goldmoss Stonecrop. on rocks by swimming pool, Hamilton House
<i>Sedum kamtschaticum</i>	Orange Stonecrop.
Family Grossulariaceae	
<i>Ribes hirtellum</i>	Hairy-stemmed Gooseberry. at southwest point of island first identified to species by Nichols and Nichols (2008)
<i>Ribes lacustre</i>	Prickly Currant. Boden Trail, first identified to species by Nichols and Nichols (2008)
Family Rosaceae	
<i>Amelanchier canadensis</i>	Canadian Serviceberry. (Nichols and Nichols 2008)
<i>Amelanchier x intermedia</i>	Shadbush. blooms late May
<i>Argentina egedii ssp. groenlandica</i>	Pacific Silverweed (= <i>Potentilla anserina</i>).
<i>Aronia floribunda</i>	Purple Chokeberry. (Nichols and Nichols 2008)
<i>Crataegus sp.</i>	Hawthorn. grove near southwest end of island
<i>Fragaria vesca</i>	Woodland Strawberry.
<i>Fragaria virginiana</i>	Wild Strawberry. path edges
<i>Malus sylvestris</i>	European Crabapple (= <i>Pyrus malus</i>). persisting in central valley and north of Utility Building; some individuals may be variety <i>Gravenstein</i>
<i>Photinia melanocarpa</i>	Black Chokeberry (= <i>Pyrus melanocarpa</i>).

<i>Photinia pyrifolia</i>	Red Chokeberry (= <i>Pyrus arbutifolia</i>).
<i>Potentilla argentea</i>	Silver Cinquefoil. (Nichols and Nichols 2008)
<i>Potentilla gracilis</i>	Slender Cinquefoil.
<i>Potentilla norvegica</i>	Norwegian Cinquefoil.
<i>Potentilla recta</i>	Roughfruit Cinquefoil.
<i>Potentilla simplex</i>	Common Cinquefoil.
<i>Prunus pensylvanica</i>	Pin Cherry. blooms late May
<i>Prunus serotina</i>	Black Cherry. blooms mid-June, gall caused by fungus
<i>Prunus virginiana</i>	Chokecherry. blooms early June
<i>Pyrus communis</i>	Common Pear. (Nichols and Nichols 2008)
<i>Rosa allegheniensis</i>	Allegheny Blackberry. wetter areas
<i>Rosa palustris</i>	Swamp Rose. (Nichols and Nichols 2008)
<i>Rosa rugosa</i>	Salt-spray Rose. one at Siren's Cove, one at Smith's Cove, one near Celia Thaxter's garden
<i>Rosa virginiana</i>	Virginia Rose. Common on open ledges
<i>Rubus flagellaris</i>	Northern Dewberry. (Nichols and Nichols 2008)
<i>Rubus idaeus</i>	American Red Raspberry. drier areas
<i>Spiraea alba var. latifolia</i>	White Meadowsweet (= <i>Spiraea latifolia</i>).
Order Fabales	
Family Fabaceae (legumes)	
<i>Lathyrus japonicus</i>	Beach Pea.
<i>Medicago lupulina</i>	Black Medick.
<i>Melilotus officinalis</i>	White Sweet Clover (= <i>Melilotus alba</i>).
<i>Trifolium pratense</i>	Red Clover.
<i>Trifolium repens</i>	White Clover.
<i>Vicia cracca</i>	Cow Vetch.
<i>Vicia sativa</i>	Garden Vetch.
<i>Vicia villosa</i>	Hairy Vetch.
Order Myrtales	
Family Lythraceae	
<i>Lythrum hyssopifolia</i>	Hyssop Loosestrife.
<i>Lythrum salicaria</i>	Purple Loosestrife. (confirmed by Nichols and Nichols 2008)
Family Onagraceae	
<i>Circaea lutetiana</i>	Broadleaf Enchanter's Nightshade. (Nichols and Nichols 2008)
<i>Epilobium ciliatum</i>	Rocky Mountain Willowherb (= <i>Epilobium saximontanum</i>).
<i>Epilobium coloratum</i>	Purpleleaf Willowherb. (Nichols and Nichols 2008)
<i>Epilobium hirsutum</i>	Codlins and Cream. (Nichols and Nichols 2008)
<i>Epilobium palustre</i>	Marsh Willowherb.
<i>Ludwigia palustris</i>	Marsh Primrose Willow. wet meadows, Northern Valley, August
<i>Oenothera biennis</i>	Evening Primrose.
Order Celastrales	
Family Aquifoliaceae	
<i>Ilex verticillata</i>	Common Winterberry.
Order Rhamnales	
Family Vitaceae	
<i>Parthenocissus quinquefolia</i>	Virginia Creeper.
<i>Vitis labrusca</i>	Fox Grape. (Nichols and Nichols 2008)
Order Polygonales	
Family Polygonaceae	
<i>Fallopia scandens</i>	Climbing False Buckwheat (= <i>Polygonum scandens</i>). along roads, August
<i>Persicaria amphibia</i>	Water Smartweed. (Nichols and Nichols 2008)
<i>Persicaria hydropiper</i>	Marsh-Pepper Smartweed. (Nichols and Nichols 2008)
<i>Persicaria punctata</i>	Dotted Smartweed. (Nichols and Nichols 2008)
<i>Polygonum aviculare</i>	Prostrate Knotweed. gull lawns
<i>Polygonum aviculare</i>	Prostrate Knotweed. (Nichols and Nichols 2008)
<i>Polygonum buxiforme</i>	Box Knotweed. (Nichols and Nichols 2008)
<i>Polygonum convolvulus</i>	Black Bindweed.
<i>Polygonum lapathifolium</i>	Pale Smartweed. lawns, wet meadows
<i>Polygonum pensylvanicum</i>	Pennsylvania Smartweed.

<i>Polygonum persicaria</i>	Lady's Thumb. cobble beaches
<i>Rosa acetosella</i>	Sheep Sorrel. Common in gull lawns
<i>Rumex crispus</i>	Curly Dock.
<i>Rumex obtusifolius</i>	Bitter Dock. wet meadows, Northern Valley, August
<i>Rumex pallidus</i>	Seaside Dock. (Nichols and Nichols 2008)
Order Sapindales	
Family Aceraceae	
<i>Acer rubrum</i>	Red Maple. numerous in high interior shrub community
<i>Acer saccharum</i>	Sugar Maple. one, east of Bartels Hall, discovered 1994
Family Anacardiaceae	
<i>Rhus hirta</i>	Staghorn Sumac (= <i>Rhus typhina</i>).
<i>Toxicodendron radicans</i>	Poison Ivy.
Family Hippocastanaceae	
<i>Aesculus hippocastanum</i>	Horse Chestnut. one, northeast of St. Hilaire cottage
Order Geraniales	
Family Balsaminaceae	
<i>Impatiens capensis</i>	Jewelweed. wet meadows, woodlands
Family Geraniaceae	
<i>Geranium robertianum</i>	Robert Geranium. one on point west of Utility Building
Family Oxalidaceae	
<i>Oxalis stricta</i>	Yellow Wood-Sorrel (= <i>Oxalis europaea</i>). lawns
Order Apiales	
Family Apiaceae	
<i>Angelica lucida</i>	Seaside Angelica. near east shore
<i>Daucus carota</i>	Queen Ann's Lace.
<i>Heracleum maximum</i>	Cow Parsnip (= <i>Heracleum lanatum</i>).
<i>Ligusticum scoticum</i>	Scotch Lovage. near east shore
Subclass Asteridae	
Order Gentianales	
Family Asclepiadaceae	
<i>Asclepias syriaca</i>	Milkweed. near sewage treatment site
Order Solanales	
Family Convolvulaceae	
<i>Calystegia sepium</i>	Hedge Bindweed (= <i>Convolvulus sepium</i>).
<i>Convolvulus arvensis</i>	Field Bindweed. roadsides
Family Cuscutaceae	
<i>Cuscuta gronovii</i>	Dodder. first identified to species by Nichols and Nichols (2008)
Family Solanaceae	
<i>Solanum dulcamara</i> including f. <i>albiflorum</i>	Bittersweet Nightshade. <i>S. dulcamara</i> is common in edge areas, woody, with blue flowers and red berries; forma <i>albiflorum</i> is less common, woody, with white flowers and red berries
<i>Solanum nigrum</i>	Deadly Nightshade. shore-line rock crevices; herbaceous, with white flowers and black berries
Order Lamiales	
Family Lamiaceae	
<i>Blephilia hirsuta</i>	Wood Mint. by Kiggins porch
<i>Galeopsis bifida</i>	Hempnettle (= <i>Galeopsis tetrahit</i>).
<i>Glechoma hederacea</i>	Ground Ivy. (Nichols and Nichols 2008)
<i>Lycopus americanus</i>	Water Horehound.
<i>Lycopus uniflorus</i>	by well, Northern Valley, 1989
<i>Mentha arvensis</i>	Wild Mint. (Nichols and Nichols 2008)
<i>Nepeta cataria</i>	Catnip.
<i>Scutellaria galericulata</i>	Marsh Skullcap.
<i>Teucrium canadense</i>	American Germander.
Order Plantaginales	
Family Plantaginaceae	
<i>Plantago lanceolata</i>	English Plantain.
<i>Plantago major</i>	Common Plantain.
<i>Plantago maritima</i>	Goose Tongue. (confirmed by Nichols and Nichols 2008)

Order Scrophulariales	
Family Oleaceae	
<i>Syringa vulgaris</i>	Lilac. planted near foundations
Family Orobanchaceae	
<i>Orobanche uniflora</i>	Oneflowered Broomrape. well trail, June 1988
Family Scrophulariaceae	
<i>Lindernia dubia</i>	False Pimpernel. wet meadows, with <i>Ludwigia</i>
<i>Nuttallanthus canadensis</i>	Blue Toadflax (= <i>Linaria canadensis</i>).
<i>Verbascum thapsus</i>	Common Mullein.
<i>Veronica arvensis</i>	Field Speedwell.
<i>Veronica peregrina</i>	Neckweed. (Nichols and Nichols 2008)
<i>Veronica scutellata</i>	Skullcap Speedwell. (Nichols and Nichols 2008)
<i>Veronica serpyllifolia</i>	Thymeleaf Speedwell. (Nichols and Nichols 2008)
Order Campanulales	
Family Campanulaceae	
<i>Campanula sp.</i>	Bellflower.
Order Rubiales	
Family Rubiaceae	
<i>Galium aparine</i>	Bedstraw.
<i>Galium asprellum</i>	Rough Bedstraw. (Nichols and Nichols 2008)
<i>Galium tinctorium</i>	Stiff Marsh Bedstraw. bog mat, Hotel Reservoir
<i>Galium trifidum</i>	Threepetal Bedstraw. (Nichols and Nichols 2008)
<i>Houstonia caerulea</i>	Azure Bluet.
Order Dipsacales	
Family Caprifoliaceae	
<i>Sambucus nigra ssp. canadensis</i>	American Black Elderberry (= <i>Sambucus canadensis</i>).
<i>Viburnum dentatum var. lucidum</i>	Southern Arrowwood (= <i>Viburnum recognitum</i>). deeper valleys
	Wild Raison (= <i>Viburnum cassinoides</i>). one, path north of Loughton
<i>Viburnum nudum var. cassinoides</i>	
Order Asterales	
Family Asteraceae	
<i>Achillea millefolium</i>	Common Yarrow.
<i>Ambrosia artemisiifolia</i>	Common Ragweed.
<i>Arctium minus</i>	Common Burdock.
<i>Artemisia vulgaris</i>	Common Mugwort. gravel near shore
<i>Bidens cernua</i>	Nodding Beggartick. (Nichols and Nichols 2008)
<i>Bidens connata</i>	Purplestem Beggarticks. (Nichols and Nichols 2008)
<i>Bidens frondosa</i>	Devil's Beggartick.
<i>Cichorium intybus</i>	Chicory.
<i>Cirsium arvense</i>	Canada Thistle.
<i>Cirsium vulgare</i>	Bull Thistle.
<i>Conyza canadensis</i>	Horseweed. gravel beaches
<i>Erechtites hieracifolia</i>	American Burnweed. (Nichols and Nichols 2008)
<i>Erigeron annuus</i>	Eastern Daisy Fleabane.
<i>Euthamia graminifolia</i>	Flat-top Goldentop (= <i>Solidago graminifolia</i>). along Celia Thaxter Way, August 1988
<i>Galinsoga quadriradiata</i>	Shaggy Soldier (includes <i>Galinsoga ciliata</i>). by Commons, September 1989
<i>Gnaphalium uliginosum</i>	Marsh Cudweed (= <i>Filagenella uliginosum</i>). disturbed open areas, central valley, August
<i>Hieracium caespitosum</i>	King Devil (= <i>Hieracium pratense</i>).
<i>Hieracium canadense</i>	Canadian Hawkweed. path edges, early August
<i>Lactuca biennis</i>	Tall Blue Lettuce. by dorms, early August
<i>Lactuca serriola</i>	Prickly Lettuce. by Utility Building September
<i>Leontodon autumnalis</i>	Fall Dandelion. lawn by Utility Building, September
<i>Leucanthemum vulgare</i>	Oxeye Daisy.
<i>Matricaria discoidea</i>	Pineapple-weed (= <i>Matricaria matricarioides</i>).
<i>Prenanthes altissima</i>	Tall Rattlesnakeroot. path edges, August
<i>Prenanthes trifoliolata</i>	Gall of the Earth. (Nichols and Nichols 2008)
<i>Pseudognaphalium obtusifolium</i>	Sweet Everlasting (= <i>Gnaphalium obtusifolium</i>). grass, central valley, September

<i>Senecio jacobaea</i>	Tansy Ragwort. roadside north of Utility Building, September
<i>Solidago canadensis</i>	Canada Goldenrod. roadsides, early September 1989
<i>Solidago juncea</i>	Early Goldenrod. roadsides, early August
<i>Solidago rugosa</i>	Wrinkleleaf Goldenrod.
<i>Solidago sempervirens</i>	Seaside Goldenrod. shore-line rock crevices
<i>Solidago x asperula</i>	hybrid goldenrod: rugosa X sempervirens.
<i>Sonchus arvensis</i>	Field Sowthistle. (Nichols and Nichols 2008)
<i>Sonchus asper</i>	Spiny Sowthistle.
<i>Sonchus oleraceus</i>	Common Sowthistle. roadsides, central valley, August
<i>Symphotrichum novi-belgii</i>	New York Aster (= <i>Aster novi-belgii</i>). roadsides, early August
<i>Symphotrichum praealtum</i>	Willowleaf Aster (= <i>Aster foliaceus</i>).
<i>Symphotrichum subulatum</i>	Eastern Annual Saltmarsh Aster (= <i>Aster subulatus</i>). rocks near shore, August
<i>Tanacetum vulgare</i>	Common Tansy. point west of Utility Building
<i>Taraxacum officinale</i>	Common Dandelion.
<i>Xanthium strumarium</i>	Cocklebur. wet meadows, early August
Class Liliopsida (monocotyledons)	
Subclass Alismatidae	
Order Najadales	
Family Juncaginaceae	
<i>Triglochin maritima</i>	Arrow-Grass.
Family Zosteraceae	
<i>Zostera marina</i>	Eelgrass. subtidal sand
Subclass Arecidae	
Order Arales	
Family Araceae	
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit.
Family Lemnaceae	
<i>Lemna minor</i>	Common Duckweed.
Subclass Commelinidae	
Order Juncales	
Family Juncaceae	
<i>Juncus bufonius</i>	Toad Rush. rocky edge of northern valley
<i>Juncus canadensis</i>	Canadian Rush.
<i>Juncus effusus</i>	Common Rush.
<i>Juncus gerardii</i>	Saltmarsh Rush. salt marsh
<i>Juncus greenei</i>	Greene's Rush.
<i>Juncus tenuis</i>	Slender Rush.
<i>Luzula multiflora</i>	Common Woodrush.
Order Cyperales	
Family Cyperaceae	
<i>Bolboschoenus robustus</i>	Seacoast Bulrush. (Nichols and Nichols 2008)
<i>Carex canescens</i>	Silvery Sedge. (Nichols and Nichols 2008)
<i>Carex crinita</i>	Fringed Sedge. (Nichols and Nichols 2008)
<i>Carex debilis</i>	White Edge Sedge.
<i>Carex echinata</i>	Star Sedge (= <i>Carex cephalantha</i>).
<i>Carex hormathodes</i>	Marsh Straw Sedge. (Nichols and Nichols 2008)
<i>Carex pennsylvanica</i>	Pennsylvania Sedge. (Nichols and Nichols 2008)
<i>Carex scoparia</i>	Broom Sedge. wet meadows
<i>Carex silicea</i>	Beach Sedge. (Nichols and Nichols 2008)
<i>Cyperus erythrorhizos</i>	Redroot Flatsedge. central valley
<i>Cyperus sp.</i>	Umbrella Sedge. northern valley, August
<i>Dulichium arundinaceum</i>	Threeway Sedge. (Nichols and Nichols 2008)
<i>Eleocharis acicularis</i>	Needle Spikerush. wet meadows, early August
<i>Eleocharis flavescens</i>	Yellow Spikerush. (Nichols and Nichols 2008)
<i>Eleocharis obtusa</i>	Blunt Spikerush. wet meadows, early August
<i>Eleocharis palustris</i>	Common Spikerush. central valley, July
<i>Eleocharis parvula</i>	Dwarf Spikerush. (Nichols and Nichols 2008)
<i>Eleocharis uniglumis</i>	Saltmarsh Spikerush (= <i>Eleocharis halophila</i>).
<i>Schoenoplectus acutus</i>	Hardstem Bulrush (= <i>Scirpus acutus</i>).
<i>Schoenoplectus pungens</i>	American Bulrush (= <i>Scirpus americanus</i>). central valley
<i>Schoenoplectus tabernaemontani</i>	Softstem Bulrush (= <i>Scirpus validus</i>). wet meadows, early

	August
<i>Scirpus cyperinus</i>	Woolgrass. (Nichols and Nichols 2008)
Family Poaceae	
<i>Agrostis capillaris</i>	Colonial Bentgrass (= <i>Agrostis tenuis</i>). path edges
<i>Agrostis gigantea</i>	Redtop (= <i>Agrostis alba</i>). central valley
<i>Agrostis scabra</i>	Rough Bentgrass. (Nichols and Nichols 2008)
<i>Agrostis stolonifera</i>	Creeping Bentgrass. (Nichols and Nichols 2008)
<i>Alopecurus pratensis</i>	Meadow Foxtail.
<i>Anthoxanthum odoratum</i>	Sweet Vernalgrass.
<i>Bromus hordeaceus</i>	Soft Brome. (Nichols and Nichols 2008)
<i>Bromus marginatus</i>	Brome Grass.
<i>Bromus tectorum</i>	Brome Grass. dry rocky areas, June
<i>Calamagrostis canadensis</i>	Bluejoint. (Nichols and Nichols 2008)
<i>Deschampsia flexuosa</i>	Wavy Hairgrass. (Nichols and Nichols 2008)
<i>Dichanthelium acuminatum var. fasciculatum</i>	Western Panicgrass (= <i>Panicum lanuginosum var. implicatum</i>).
<i>Digitaria ischaemum</i>	Smooth Crabgrass. (Nichols and Nichols 2008)
<i>Elymus repens</i>	Quackgrass (= <i>Agropyron repens</i>).
<i>Elymus virginicus</i>	Terrell Grass. gravel, ledges, August
<i>Eragrostis pectinacea</i>	Tufted Lovegrass. (Nichols and Nichols 2008)
<i>Festuca ovina</i>	Sheep Fescue.
<i>Festuca rubra</i>	Red Fescue. (Nichols and Nichols 2008)
<i>Hordeum jubatum</i>	Squirrel-tail Grass. dry roadsides near dock, July
<i>Leersia oryzoides</i>	Rice Cutgrass. (Nichols and Nichols 2008)
<i>Lolium perenne</i>	Perennial Ryegrass. (Nichols and Nichols 2008)
<i>Lolium pratense</i>	(Nichols and Nichols 2008)
<i>Panicum capillare</i>	Witchgrass. (Nichols and Nichols 2008)
<i>Panicum dichotomiflorum</i>	Fall Panicgrass. wet meadows, early August
<i>Phleum pratense</i>	Timothy.
<i>Poa annua</i>	Annual Bluegrass. (Nichols and Nichols 2008)
<i>Poa compressa</i>	Canada Bluegrass. (Nichols and Nichols 2008)
<i>Poa palustris</i>	Fowl Bluegrass. (Nichols and Nichols 2008)
<i>Poa pratensis</i>	Kentucky Bluegrass.
<i>Puccinellia maritima</i>	Alkaligrass. with <i>Spartina patens</i> , intertidal, late July first identified to species by Nichols and Nichols (2008)
<i>Spartina alterniflora</i>	Smooth Cordgrass. intertidal marsh
<i>Spartina patens</i>	Saltmeadow Cordgrass. intertidal marsh
<i>Torreyochloa pallida</i>	Pale False Mannagrass. (Nichols and Nichols 2008)
<i>Zizania aquatica</i>	Annual Wildrice. (Nichols and Nichols 2008)
Order Typhales	
Family Typhaceae	
<i>Typha angustifolia</i>	Narrowleaf Cattail. (Nichols and Nichols 2008)
<i>Typha latifolia including f. ambigua</i>	Common Cattail.
Subclass Liliidae	
Order Liliales	
Family Iridaceae	
<i>Iris versicolor</i>	Harlequin Blueflag. Common in wet depressions
<i>Sisyrinchium montanum</i>	Strict Blue-Eyed Grass.
Family Liliaceae	
<i>Allium schoenoprasum</i>	Wild Chives.
<i>Asparagus officinalis</i>	Asparagus. persists along Marginal Way
<i>Convallaria majalis</i>	Lily-of-the-valley.
<i>Erythronium americanum</i>	Trout Lily (= <i>Erythronium umbilicatum</i>). shaded areas with rich soil, early May
<i>Galanthus nivalis</i>	Snowdrop. grass west of garden, early April (escaped from Celia Thaxter's garden)
<i>Hemerocallis fulva</i>	Orange Daylily. north of Celia Thaxter foundation, north of cemetery
<i>Maianthemum canadense</i>	Canada Mayflower.
<i>Maianthemum racemosum</i>	Feathery False Solomon's Seal (= <i>Smilacina racemosa</i>).
<i>Maianthemum stellatum</i>	Starry False Solomon's-Seal (= <i>Smilacina stellata</i>).
<i>Polygonatum biflorum</i>	Smooth Solomon's Seal. (Nichols and Nichols 2008)

Polygonatum pubescens
Family Smilacaceae
Smilax herbacea
Smilax rotundifolia

Hairy Solomon's Seal.

Smooth Carrionflower. Wodehouse Trail
Greenbrier. several patches: ledge east of Crystal Lake;
near Sandpiper Beach; Celia Thaxter Way

FUNGI

Division Ascomycota (sac fungi, including lichens) (see R. M. Taylor, 1982)

Class Ascomycetes

Order Pyrenulales

Family Pyrenulaceae

Pyrenocollema halodytes

(= *Arthopyrenia halodytes*). thin, brown/red lichen in upper
barnacle zone and spray zone

Order Verrucariales

Family Verrucariaceae

Verrucaria degelii

Degel's Wart Lichen. black, cracked lichen in spray zone,
especially near crevices

Wart Lichen. green, smooth lichen abundant intertidally

Verrucaria mucosa

Order Lecanorales

Family Parmeliaceae

Flavoparmelia caperata

(= *Pseudoparmelia caperata*). gray crustose lichen on
terrestrial rocks

Aspicilea cinerea

Candeloriella vitellina

Dimelaena oreina

Lecanora xylophila

Parmelia sulcata

Phaeophysicia adiastrum

Physcia millegrana

Xanthoparmelia conspersa

Xanthoria elegans

Xanthoria parietina

Xanthoria polycarpa

ANIMALS

Phylum Porifera (sponges)

Class Calcarea (calcareous sponges)

Order Leucosolenida

Family Leucosoleniidae

Leucosolenia botryoides

Family Sycettidae

Scypha ciliata

Class Demospongiae

Order Hadromerida

Family Clionidae

Cliona celata

Sulfur Sponge.

Family Polymastiidae

Polymastia boletiformis

(= *Polymastia robusta*). found by SCUBA

Polymastia infrapilosa

found by SCUBA

Radiella hemispherica

(= *Trichostemma hemispherica*). 200'

Family Suberitidae

Suberitechnius hispidus

found by SCUBA

Order Poecilosclerida

Family Acarnidae

Iophon nigricans

on brachiopod shells

Iophon pattersoni

(= *Iophon cheliferum*). on brachiopod shells

Family Isodictyidae

Isodictya deichmannae

found by SCUBA

Isodictya palmata

80', 0.1 mile NE Broad Cove, August 1988

Family Mycalidae

	<i>Mycale ovulum</i>	(= <i>Amphilectus lobatus</i> , <i>Mycalecarmia ovulum</i>).
	<i>Myxilla incrustans</i>	
Order Halichondrida	Family Halichondriidae	
	<i>Halichondria panicea</i>	Breadcrumb Sponge.
	<i>Pellina sitiens</i>	(= <i>Halichondria (Eumastia) sitiens</i>).
Order Haplosclerida	Family Chalinidae	
	<i>Haliclona loosanoffi</i>	(= <i>Chalinula loosanoffi</i>).
	<i>Haliclona oculata</i>	Dean Man's Fingers.
	<i>Haliclona urceola</i>	found by SCUBA
Order Halisarcida	Family Halisarcidae	
	<i>Halisarca sp.</i>	
Phylum Cnidaria		
Class Anthozoa		
Order Alcyonacea (soft corals)	Family Alcyoniidae	
	<i>Alcyonium sidereum</i>	subtidal, small colonies
	<i>Gersemia rubiformis</i>	found by SCUBA
	Family Clavulariidae	
	<i>Clavularia modesta</i>	found by SCUBA
Order Actiniaria (anemones)	Family Actiniidae	
	<i>Urticina felina</i>	(= <i>Tealia crassicornis</i>). subtidal
	Family Actinostolidae	
	<i>Stomphia coccinea</i>	found by SCUBA
	Family Diadumenidae	
	<i>Diadumene leucolena</i>	found by SCUBA
	Family Gonactiniidae	
	<i>Gonactinia prolifera</i>	found by SCUBA
	Family Haliplanellidae	
	<i>Haliplanella lineata</i>	(= <i>Haliplanella luciae</i>). swimming pool
	Family Hormathiidae	
	<i>Actinauge longicornis</i>	240', on <i>Neptunea</i> , July 1989
	Family Metridiidae	
	<i>Metridium senile</i>	Common Sea Anemone. abundant in cribs
Order Ceriantharia (tube anemones)	Family Cerianthidae	
	<i>Ceriantheopsis americana</i>	found by SCUBA
	<i>Cerianthus borealis</i>	found by SCUBA
Class Staurozoa		
Order Stauromedusae (stalked jellyfish)	Family Depastridae	
	<i>Craterolophus convolvulus</i>	on kelp
	Family Lucernariidae	
	<i>Lucernaria quadricornis</i>	on kelp
	<i>Haliclystus auricula</i>	on kelp
Class Scyphozoa (jellyfish)		
Order Semaestomeae	Family Cyaneidae	
	<i>Cyanea capillata</i>	Lion's Mane. planktonic
	Family Ulmaridae	
	<i>Aurelia aurita</i>	Moon Jelly. planktonic
Class Hydrozoa		
Order Limnomedusae	Family Olindiidae	
	<i>Gonionemus vertens</i>	medusa, plankton net
Order Leptothecatae (thecate hydroids)	Family Aequoreidae	
	<i>Aequorea forskalea</i>	medusa, plankton net

Family Campanulariidae	
Campanularia sp.	
Clytia sp.	found by SCUBA
Obelia geniculata	on kelp
Obelia longissima	(= <i>Obelia commissuralis</i>).
Family Eirenidae	
Tima formosa	medusa, plankton net
Family Haleciidae	
Halecium articulatum	found by SCUBA
Halecium halecinum	
Family Halopterididae	
Halopteris tenella	(= <i>Schizotricha tenella</i>).
Family Lafoeidae	
Grammaria abietina	found by SCUBA
Family Laodiceidae	
Staurophora mertensii	(= <i>Staurophora mertensi</i>). medusa, plankton net
Family Melicertidae	
Melicertum octocostatum	medusa, plankton net, August
Family Sertulariidae	
Abietinaria abietina	Sea Fir.
Dynamena pumila	(= <i>Sertularia pumila</i>). Common, intertidal
Sertularella rugosa	
Sertularia cupressina	(= <i>Thuiaria cupressina</i>). found by SCUBA
Sertularia similis	
Order Siphonophorae	
Stephanomia sp.	plankton net
Order Anthoathecatae (athecate hydroids)	
Family Bougainvilliidae	
Bougainvillia britannica	medusa, plankton net
Bougainvillia sp.	
Family Corymorphidae	
Corymorpha pendula	subtidal sand
Family Eudendriidae	
Eudendrium album	
Eudendrium rameum	found by SCUBA
Eudendrium vaginatum	
Family Hydractiniidae	
Hydractinia arge	(= <i>Stylactis arge</i>).
Hydractinia echinata	on snail shells inhabited by hermit crabs
Clava multicornis	(= <i>Clava leptostyla</i>). intertidal, on rockweed bases
Family Oceanidae	
Rhizogeton fusiformis	low tide pool, east side of island, June 1988
Family Pandeidae	
Catablema vesicarium	plankton net
Family Tubulariidae	
Ectopleura crocea	(= <i>Tubularia crocea</i>). dock, outlet of swimming pool
Ectopleura larynx	(= <i>Tubularia larynx</i>).
Phylum Ctenophora (comb jellies)	
Class Tentaculata	
Order Cydippida	
Family Pleurobrachiidae	
Pleurobrachia pileus	plankton net
Order Lobata	
Family Bolinopsidae	
Bolinopsis infundibulum	plankton net
Class Nuda	
Order Beroida	
Family Beroidae	
Beroe cucumis	plankton net

Phylum Platyhelminthes (flatworms)	
Class Turbellaria (free-living flatworms)	
Subclass Archoophora	
Order Acoela	
Family Convolutidae	
<i>Childia fusca</i>	not in ITIS, needs verification
<i>Convoluta convoluta</i>	subtidal, on algae, first seen 1996 (Byrnes and Witman 2003)
Order Proseriata	
Family Monocelididae	
<i>Monocelis sp.</i>	
Family Plagiostomidae	
<i>Plagiostomum sp.</i>	
Order Tricladida	
Family Procerodidae	
<i>Foviella affinis</i>	intertidal, on <i>Chondrus crispus</i>
<i>Procerodes littoralis</i>	intertidal, areas of low and variable salinity
Order Polycladida	
Family Leptoplanidae	
<i>Euplana gracilis</i>	
<i>Notoplana atomata</i>	low intertidal pools
Class Monogenea (flukes with one host)	
Order Monopisthocotylea	
Family Capsalidae	
<i>Capsala mola</i>	on skin of <i>Mola</i>
Order Polyopisthocotylea	
Family Diclidophoridae	
<i>Diclidophora denticulata</i>	on pollock gills
Class Trematoda (flukes with multiple hosts)	
Subclass Digenea	
Order Azygiida	
Family Accacoeliidae	
<i>Orophocotyle foliata</i>	larvae probably in jellyfish and pteropods; adults in <i>Mola</i> . Not in ITIS, needs verification
Family Hemiuridae	
<i>Brachyphallus crenatus</i>	
<i>Derogenes varicus</i>	
<i>Hemiurus levinsenii</i>	
<i>Lecithaster confusus</i>	
Order Echinostomida	
Family Philophthalmidae	
<i>Parorchis ocanthus</i>	larvae in <i>Nucella</i> ; adult in gulls
Order Opisthorchiida	
Family Acanthocolpidae	
<i>Stephanostomum spp.</i>	in sculpins
Family Heterophyidae	
<i>Cryptocotyle lingua</i>	larvae in <i>Littorina</i> ; minute larvae in skin and fins of pollock; adult in gulls
Order Plagiorchiida	
Family Opecoelidae	
<i>Podocotyle olssoni</i>	
Order Strigeata	
Family Fellodistomidae	
<i>Fellodistomum furcigerum</i>	in flounders
Family Bucephalidae	
<i>Prosorhynchus crucibulum</i>	in sea ravens
Class Cestoda (tapeworms, in vertebrate alimentary tracts)	
Order Pseudophyllidea	
Family Bothriocephalidae	
<i>Bothriocephalus scorpii</i>	in sculpins, flounders
<i>Clestobothrium crassiceps</i>	in silver hake

Order Tetracyllidea	
Family Tetracyllidea incertae sedis	
<i>Scolex polymorphus</i>	larvae in fish; adults in <i>Chondrichthyes</i>
Phylum Nemertea (proboscis worms)	
Class Anopla	
Order Paleonemertea	
Family Cephalothricidae	
<i>Procephalothrix spiralis</i>	
Order Heteronemertea	
Family Lineidae	
<i>Cerebratulus lacteus</i>	in <i>Mytilus edulis</i> clumps, Broad Cove
<i>Lineus ruber</i>	
<i>Lineus socialis</i>	(= <i>Rhamphogordius sanguineus</i>).
<i>Micrura affinis</i>	
<i>Micrura leidyi</i>	180', mud
Class Enopla	
Order Hoplonemertea	
Suborder Monostilifera	
Family Amphiporidae	
<i>Amphiporus angulatus</i>	
<i>Amphiporus tetrasorus</i>	
Family Prosorhochmidae	
<i>Oerstedtia dorsalis</i>	
Family Tetrastemmatidae	
<i>Tetrastemma candidum</i>	intertidal
Phylum Nemata (nematodes, roundworms)	
Class Secernentea	
Order Rhabditida	
Family Trichuridae	
<i>Capillaria sp.</i>	in sculpin rectum
Order Ascaridida	
Family Anisakidae	
<i>Contracaecum aduncum</i>	in cod and pollock: larvae in liver, adults in gut
Family Toxocaridae	
<i>Porrocaecum decipiens</i>	Codworm. larvae in cod muscles; adults in seals; many free-living and parasitic nematodes. Not in ITIS, needs verification
Phylum Nematomorpha (horsehair worms)	
Order Nectonematoidea	
Family Nectonemidae	
<i>Nectonema agile</i>	night plankton
Phylum Acanthocephala (spiny-headed worms)	
Class Palaeacanthocephala	
Order Echinorhynchida	
Family Echinorhynchidae	
<i>Echinorhynchus gadi</i>	larvae in amphipods; adults in fish gut
Order Polymorphida	
Family Polymorphidae	
<i>Corynosoma wegneri</i>	larvae in fish mesenteries; adults in seals
Phylum Entoprocta	
Family Barentsiidae	
<i>Barentsia sp.</i>	outlet of swimming pool, July 1985
Family Pedicellinidae	
<i>Pedicellina cernua</i>	

Phylum Sipuncula (sipunculid worms)	
Class Sipunculida	
Family Golfingiidae	
<i>Phascolion strombi</i>	dredged
Family Sipunculidae	
<i>Phascolopsis gouldi</i>	30', shell hash, Duck Island
Phylum Annelida (segmented worms)	
Class Clitellata	
Subclass Oligochaeta	
Order Haplotaxida	
Family Enchytraeidae	
<i>Enchytraeus albidus</i>	
Family Tubificidae	
<i>Clitellio arenata</i>	not in ITIS, needs verification
<i>Pelosclex benedeni</i>	
Subclass Hirudinea (leeches)	
Order Rhynchobdellida	
Family Piscicolidae	
<i>Johanssonia sp.</i>	
<i>Oceanobdella sp.</i>	on sculpin from 85'
<i>Piscicola rapax</i>	not in ITIS, needs verification
Class Polychaeta (polychaete worms)	
Subclass Scolecida	
Family Capitellidae (errant burrowers)	
<i>Capitella capitata</i>	
Family Opheliidae	
<i>Ophelina aulogaster</i>	(= <i>Ammotrypane aulogaster</i>). coarse subtidal sand
Family Orbiniidae (worms without appendages)	
<i>Naineris quadricuspida</i>	found by SCUBA
<i>Orbinia ornata</i>	dredged
<i>Scoloplos acutus</i>	
<i>Scoloplos fragilis</i>	
Family Paraonidae	
<i>Paraonis lyra</i>	found by SCUBA
Subclass Palpata	
Order Canalipalpata	
Suborder Sabellida	
Family Sabellidae (fan worms)	
<i>Chone infundibuliformis</i>	dredged
<i>Fabricia sabella</i>	intertidal, tubes under rocks, trawled 14
<i>Filograna implexa</i>	found by SCUBA
<i>Myxicola infundibulum</i>	trawled, found by SCUBA
<i>Potamilla neglecta</i>	
<i>Potamilla reniformis</i>	85', tubes in <i>Cliona</i> , holes in <i>Arctica</i>
<i>Sabella crassicornis</i>	trawled
Family Serpulidae (fan worms)	
<i>Dexiospira spirillum</i>	Spiral Tube Worm (= <i>Spirorbis spirillum</i>). intertidal, under rocks
<i>Hydroides sp.</i>	
<i>Spirorbis borealis</i>	Spiral Tube Worm. intertidal, under rocks
<i>Spirorbis violaceus</i>	Spiral Tube Worm. intertidal, under rocks
Suborder Spionida	
Family Apistobranchidae	
<i>Apistobranchus tullbergi</i>	
Family Spionidae (worms with long palps)	
<i>Marenzelleria viridis</i>	(= <i>Scolecopelides viridis</i>).
<i>Polydora ciliata</i>	
<i>Polydora commensalis</i>	found by SCUBA
<i>Prionospio sp.</i>	found by SCUBA
Suborder Terebellida	
Family Ampharetidae (worms with retractile tentacles)	

<i>Asabellides oculata</i>	found by SCUBA
<i>Anobothrus gracilis</i>	(= <i>Ampharete gracilis</i>). found by SCUBA
Family Cirratulidae (worms with threadlike gills)	
<i>Cirratulus cirratus</i>	found by SCUBA
<i>Cirratulus grandis</i>	found by SCUBA
<i>Dodecaceria corallii</i>	found by SCUBA
<i>Tharyx acutus</i>	
Family Flabelligeridae (worms with retractible cephalic gills)	
<i>Brada granosa</i>	found by SCUBA
<i>Flabelligera affinis</i>	found by SCUBA
<i>Pherusa plumosa</i>	found by SCUBA
Family Pectinariidae (worms with golden setae)	
<i>Pectinaria gouldi</i>	Ice Cream Cone Worm.
<i>Pectinaria granulata</i>	found by SCUBA
Family Sternaspidae	
<i>Sternaspis fossor</i>	150', sandy mud
Family Terebellidae (worms with nonretractile tentacles)	
<i>Amphitrite cirrata</i>	found by SCUBA
<i>Amphitrite johnstoni</i>	found by SCUBA
<i>Enoplobranchus sanguineus</i>	trawled
<i>Neoamphitrite affinis</i>	(= <i>Amphitrite affinis</i>). found by SCUBA
<i>Nicolea venustula</i>	
<i>Pista palmata</i>	
<i>Thelepus cincinnatus</i>	dredged, found by SCUBA
Family Trichobranchidae	
<i>Terebellides stroemi</i>	dredged
Order Aciculata	
Family Aphroditidae (sea mice)	
<i>Aphrodita hastata</i>	180', mud
Family Dorvilleidae	
<i>Dinophilus sp.</i>	
Family Euphrosinidae	
<i>Euphrosine borealis</i>	found by SCUBA
Family Glyceridae	
<i>Glycera capitata</i>	
Family Nephtyidae	
<i>Nephtys ciliata</i>	found by SCUBA
<i>Nephtys incisa</i>	dredged, found by SCUBA
Family Nereididae	
<i>Neanthes virens</i>	Clamworm (= <i>Nereis virens</i>). Babb's Cove, swimming pool
<i>Nereis pelagica</i>	
Family Nerillidae	
<i>Nerilla antennata</i>	
Family Onuphidae	
<i>Onuphis quadricuspis</i>	
Family Pholoidae	
<i>Pholoe minuta</i>	found by SCUBA
Family Phyllodocidae	
<i>Anaitides groenlandica</i>	(= <i>Phyllodoce groenlandica</i>). found by SCUBA
<i>Anaitides maculata</i>	(= <i>Phyllodoce maculata</i>).
<i>Anaitides mucosa</i>	(= <i>Phyllodoce mucosa</i>).
<i>Eteone sp.</i>	found by SCUBA
<i>Eulalia viridis</i>	85', gravel
<i>Phyllodoce arenae</i>	dredged
Family Polynoidae (scale worms)	
<i>Harmothoe extenuata</i>	
<i>Harmothoe imbricata</i>	intertidal
<i>Lepidonotus squamatus</i>	intertidal
Family Syllidae	
<i>Autolytus cornutus</i>	
<i>Exogone hebes</i>	found by SCUBA
<i>Syllis gracilis</i>	found by SCUBA

<i>Syllis spongiphila</i>	
Family Tomopteridae	
<i>Tomopteris helgolandica</i>	plankton net
Family Nephtyidae	
<i>Nephtys buccera</i>	found by SCUBA
Phylum Tardigrada (water bears)	
Class Heterotardigrada	
Order Echiniscoidea	
Family Echiniscoididae	
<i>Echiniscoides pollocki</i>	on algae associated with intertidal barnacles
<i>Echiniscoides sigismundi</i>	
Class Eutardigrada	
Order Apochela	
Family Milnesiidae	
<i>Milnesium tardigradum</i>	Golden Lichen Tardigrade; common in golden lichen on Radar Tower
Phylum Arthropoda (seaspiders, mites, insects, crustacea)	
Subphylum Crustacea (crabs, shrimp, barnacles, and others)	
Class Branchiopoda	
Order Diplostraca	
Family Podonidae	
<i>Evadne nordmanni</i>	plankton net
<i>Podon leuckartii</i>	plankton net
Class Malacostraca	
Order Euphausiacea (krill)	
Family Euphausiidae	
<i>Meganctiphanes norvegica</i>	plankton net
Order Decapoda (crabs, shrimp, prawns, lobsters)	
infraorder Caridea (caridean and procaridean shrimp)	
Family Crangonidae	
<i>Crangon septemspinosa</i>	Sand Shrimp. 85'
Family Hippolytidae	
<i>Eualus fabricii</i>	85', shell gravel
<i>Eualus pusiolus</i>	
<i>Lebbeus groenlandicus</i>	Greenland Prawn. dredged
Family Pandalidae	
<i>Pandalus montagui</i>	Aesop Shrimp. 180', mud
infraorder Brachyura ("true" crabs)	
Family Cancridae	
<i>Cancer borealis</i>	Jonah Crab. subtidal
<i>Cancer irroratus</i>	Rock Crab. subtidal
Family Oregoniidae	
<i>Crangon septemspinosa</i>	Toad Crab. subtidal
<i>Hyas coarctatus</i>	Toad Crab. subtidal
Family Portunidae	
<i>Carcinus maenas</i>	Green Crab. intertidal
Family Varunidae	
<i>Hemigrapsus sanguineus</i>	Asian Shore Crab. first seen July 2001 (Ben Shulman)
infraorder Anomura (anomuran and hermit crabs)	
Family Lithodidae	
<i>Lithodes maja</i>	Queen Crab.
Family Paguridae	
<i>Pagurus acadianus</i>	Hermit Crab. low intertidal, common
<i>Pagurus pubescens</i>	Hermit Crab. subtidal
infraorder Astacidea	
Family Nephropidae	
<i>Homarus americanus</i>	Lobster.
Order Mysida (opossum shrimp)	
Family Mysidae	
<i>Mysis stenolepis</i>	plankton net, swimming pool

<i>Praunus flexuosus</i>	plankton net, swimming pool
Order Cumacea (cumacean shrimp)	
Family Diastylidae	
<i>Diastylis quadrispinosa</i>	dredged, found by SCUBA
<i>Diastylis sculpta</i>	found by SCUBA
Order Tanaidacea	
Family Leptocheliidae	
<i>Leptochelia dubia</i>	(= <i>Leptochelia savignyi</i>).
Order Isopoda (isopods, sowbugs)	
Family Chaetiliidae	
<i>Chiridotea tuftsii</i>	found by SCUBA
Family Gnathiidae	
<i>Gnathia cerina</i>	found by SCUBA
Family Halophilosciidae	
<i>Littorophiloscia vittata</i>	(= <i>Philoscia vittata</i>). wrack
Family Idoteidae	
<i>Idotea balthica</i>	(= <i>Idotea baltica</i>). low intertidal
<i>Idotea metallica</i>	low intertidal
<i>Idotea phosphorea</i>	
Family Janiridae	
<i>Jaera marina</i>	intertidal pools
Family Ligiidae	
<i>Ligia oceanica</i>	Wharf Roach. supratidal cliffs
Family Limnoriidae	
<i>Limnoria lignorum</i>	Wood Gribble. subtidal, woodboring
Family Porcellionidae	
<i>Porcellio scaber</i>	cobble beach
Order Amphipoda (amphipods)	
Suborder Gammaridea (gammarid amphipods)	
Family Amphilochidae	
<i>Amphilochus manudens</i>	subtidal
Family Ampithoidae	
<i>Ampithoe rubricata</i>	in tubes
Family Calliopidae	
<i>Calliopius laeviusculus</i>	
Family Corophiidae	
<i>Corophium acherusicum</i>	Rare
<i>Corophium bonelli</i>	in tubes
<i>Unicola irrorata</i>	sand. Not in ITIS, needs verification
Family Cressidae	
<i>Cressa sp.</i>	30m, rock, eastern Atlantic species only? needs verification
Family Dexaminidae	
<i>Dexamine thea</i>	
Family Eusiridae	
<i>Pontogeneia inermis</i>	
Family Gammarellidae	
<i>Gammarellus homari</i>	
Family Gammaridae	
<i>Gammarus lawrencianus</i>	
<i>Gammarus oceanicus</i>	
<i>Marinogammarus finmarchicus</i>	
<i>Marinogammarus obtusatus</i>	
Family Haustoriidae	
<i>Acanthohaustorius millsii</i>	sand
<i>Acanthohaustorius spinosus</i>	sand
<i>Protohaustorius deichmannae</i>	sand
Family Hyalidae	
<i>Hyale prevostii</i>	(= <i>Hyale nilssonii</i>).
Family Iphimediidae	
<i>Acanthonotozoma rusanovae</i>	30m, rock
Family Ischyroceridae	
<i>Erichthonius rubricornis</i>	in tubes

<i>Ischyrocerus anguipes</i>	(= <i>Ischyrocerus minutus</i>). in tubes
<i>Ischyrocerus neaminutus</i>	in tubes. Not in ITIS, needs verification
<i>Jassa falcata</i>	
Family Lysianassidae	
<i>Orchomenella minuta</i>	sand
<i>Psammonyx nobilis</i>	sand
Family Melitidae	
<i>Maera danae</i>	
<i>Melita dentata</i>	
Family Oedicerotidae	
<i>Bathymedon longimanus</i>	sand
<i>Bathymedon obtusifrons</i>	sand
<i>Bathymedon quoddyensis</i>	sand. Not in ITIS, needs verification
<i>Monoculodes latimanus</i>	
<i>Monoculodes tuberculatus</i>	sand
<i>Westwoodilla brevicealcar</i>	
Family Phoxocephalidae	
<i>Phoxocephalus holbolli</i>	sand
Family Pleustidae	
<i>Parapleustes assimilis</i>	
<i>Pleustes panoplus</i>	
<i>Pleusymtes glaber</i>	
<i>Stenopleustes gracilis</i>	
Family Stenothoidae	
<i>Metopella angusta</i>	seawater table, July
Family Synopiidae	
<i>Syrrhoe crenulata</i>	
Family Talitridae	
<i>Orchestia platensis</i>	Beachflea. wrack
Family Uristidae	
<i>Anonyx lilljeborgi</i>	sand
Family Podoceridae	
<i>Dulichia sp.</i>	in tubes
Suborder Hyperiidea (commensal amphipods)	
Family Hyperiidae	
<i>Hyperoche medusarum</i>	(= <i>Hyperoche tauriformis</i>). in combjelly <i>Bolinopsis</i>
Suborder Caprelliidea (skeleton shrimp)	
Family Caprellidae	
<i>Aeginina longicornis</i>	
<i>Caprella linearis</i>	
<i>Caprella penantis</i>	
<i>Caprella septentrionalis</i>	
Class Maxillopoda (barnacles and their kin)	
Subclass Cirripedia	
Order Pedunculata (goose barnacles)	
Family Lepadidae	
<i>Dosima fascicularis</i>	Gooseneck Barnacle. on drifted algae
Order Sessilia (sessile or acorn barnacles)	
Family Archaeobalanidae	
<i>Chirona hameri</i>	Ivory Barnacle. gill net
<i>Semibalanus balanoides</i>	Common Barnacle. Common, intertidal
Family Balanidae	
<i>Balanus balanus</i>	Horse Barnacle. subtidal, vertical walls
<i>Balanus crenatus</i>	Crenate Barnacle. subtidal, crevices
Subclass Branchiura (fish lice)	
Order Arguloidea	
Family Argulidae	
<i>Argulus sp.</i>	on pollock
Subclass Copepoda	
Order Calanoida	
Family Calanidae	
<i>Calanus sp.</i>	plankton net

Family Centropagidae	
Centropages sp.	plankton net, August
Family Clausocalanidae	
Pseudocalanus sp.	
Family Metridinidae	
Metridia sp.	
Order Harpacticoida	
unidentified species	numerous in sediments
Order Siphonostomatoida	
Family Caligidae	
Caligus sp.	on pollock
Family Pennellidae	
Lernaocera branchialis	Cod Gill Maggot.
Class Ostracoda (seed shrimps)	
unidentified ostracods	
Subphylum Chelicerata (horseshoe crabs, arachnids, seaspiders)	
Class Pycnogonida (seaspiders)	
Order Pantopoda	
Family Callipallenidae	
Callipallene brevirostris	found by SCUBA
Family Nymphonidae	
Nymphon grossipes	105', gravel; 200', dump site
Nymphon stroemi	gill net
Family Phoxichilidiidae	
Anoplodactylus lentus	
Phoxichilidium femoratum	
Family Tanystylidae	
Tanystylum orbiculare	found by SCUBA
Class Arachnida (spiders, mites, other terrestrial forms)	
Order Araneae	
Family Agelenidae	
Agelenopsis potteri	Funnel Web Spider. in wrack
Family Lycosidae	
Pardosa lapidicina	Black Wolf Spider. in wrack
Lamprocherus oblongus	Spider. in wrack. Not in ITIS, needs verification
Subclass Acari (mites and ticks)	
Order Trombidiformes	
Family Halacaridae	
Halacarus sp.	Red Mite.
Family Macrochelidae	
Macrocheles sp.	Bee Mites. in wrack. Not in ITIS, needs verification
Family Trombidiidae	
Trombidium sp.	Velvet Mite.
unidentified mites	
Subphylum Hexapoda (insects and their kin)	
Class Entognatha (springtails)	
Order Collembola	
Family Neanuridae	
Anurida maritima	intertidal rocks and pools
Class Insecta	
Order Archaeognatha	
Family Machilidae	
Petrobius maritimus	Jumping Bristletail. spray zone, crevices
Order Dermaptera (earwigs)	
Family Carcinophoridae	
Anisolabis maritima	cobble, wrack
Order Hemiptera (true bugs)	
Family Corixidae	
Trichocorixa verticalis	Water Boatman. pools
Family Notonectidae	

<i>Notonecta sp.</i>	Backswimmer. pools
Order Coleoptera (beetles)	
Family Anthicidae (Anthicid beetles)	
<i>Anthicus cervinus</i>	cobble
Family Dermestidae (larder beetles)	
<i>Dermestes caninus</i>	cobble
<i>Dermestes vulpinus</i>	cobble. Not in ITIS, needs verification
Family Hydrophilidae (water scavenger beetles)	
<i>Cercyon sp.</i>	wrack
Family Nitidulidae	
<i>Carpophilus marginellus</i>	(= <i>Carpophilus nitens</i>). wrack
<i>Stelidota geminata</i>	cobble, wrack
Family Staphylinidae (carrion beetles)	
<i>Aleochara lata</i>	wrack
<i>Creophilus maxillosus</i>	Hairy Rove Beetle. cobble, wrack
<i>Philonthus politus</i>	Rove Beetle. wrack
Order Diptera (flies, midges, mosquitoes)	
Family Anthomyiidae	
<i>Fucellia sp.</i>	wrack
Family Ceratopogonidae	
Unidentified species	larvae of "punkies" in intertidal algae
Family Coelopidae (seaweed flies)	
<i>Coelopa frigida</i>	wrack
Family Culicidae (mosquitoes)	
<i>Aedes cantator</i>	pools
<i>Aedes sollicitans</i>	pools
Family Ephydriidae (shore flies)	
<i>Ephydra sp.</i>	pools
Family Fanniidae	
<i>Fannia canicularis</i>	wrack
Family Muscidae (house flies)	
Unidentified species	
Family Sphaeroceridae	
<i>Thoracochaeta sp.</i>	wrack
Family Syrphidae (flower flies)	
<i>Eristalinus aeneus</i>	pools
Phylum Mollusca	
Class Polyplacophora (chitons)	
Order Neoloricata	
Family Hanleyidae	
<i>Hanleya hanleyi</i>	
Family Ischnochitonidae	
<i>Chaetopleura apiculata</i>	90', on boulder, May 1988
<i>Ischnochiton albus</i>	(= <i>Ischnochiton alba</i> , <i>Stenosemus albus</i>).
<i>Tonicella marmorea</i>	found by SCUBA
<i>Tonicella rubra</i>	(= <i>Ischnochiton ruber</i>). low intertidal crevices
Family Mopaliidae	
<i>Amicula vestita</i>	found by SCUBA, Pacific only? Needs verification
Class Bivalvia (clams, mussels, other bivalved or pelecypod molluscs)	
Subclass Protobranchia	
Order Solemyoidea	
Family Solemyidae	
<i>Solemya borealis</i>	85'
Order Nuculoida	
Family Nuculanidae	
<i>Nuculana pernula</i>	dredged
<i>Nuculana tenuisulcata</i>	dredged
Family Nuculidae	
<i>Nucula sp.</i>	subtidal, gravelly mud
Family Yoldiidae	
<i>Megayoldia thraciaeformis</i>	(= <i>Yoldia thraciaeformis</i>). 250', mud

<i>Yoldia limatula</i>	dredged
Subclass Pteriomorpha	
Order Mytiloidea	
Family Mytilidae	
<i>Modiolus modiolus</i>	Horse Mussel. Common, low intertidal pools, subtidal,
<i>Musculus discors</i>	Discordant Mussel. 230', mud of dumping ground
<i>Mytilus edulis</i>	Blue Mussel. Common, intertidal, subtidal
Order Ostreoida	
Family Anomiidae	
<i>Anomia simplex</i>	Smooth Jingle Shell. low intertidal, subtidal
<i>Anomia squamula</i>	Rough Jingle Shell (= <i>Anomia aculeata</i>). subtidal attached to hard substrata
Family Ostreidae	
<i>Ostrea edulis</i>	Gosport Harbor
Family Pectinidae	
<i>Chlamys islandica</i>	85', shell gravel
<i>Placopecten magellanicus</i>	Sea Scallop. subtidal
Subclass Heterodonta	
Order Veneroidea	
Family Arctiidae	
<i>Arctica islandica</i>	Ocean Quahog. 85-137', shell gravel
Family Astartidae	
<i>Astarte castanea</i>	137', gravel
<i>Astarte crenata</i>	dredged
<i>Astarte undata</i>	100', mud
Family Cardiidae	
<i>Cerastoderma pinnulatum</i>	dredged, found by SCUBA
Family Carditidae	
<i>Cyclocardia borealis</i>	(= <i>Venericardia borealis</i>). dredged
Family Mactridae	
<i>Spisula solidissima</i>	Atlantic surf clam. 25m
Family Petricolidae	
<i>Petricolaria pholadiformis</i>	False Angelwing (= <i>Petricola pholadiformis</i>).
Family Pharidae	
<i>Ensis directus</i>	Razor Clam. 3m near mooring; shells to 30m
Family Solecurtidae	
<i>Tagelus plebeius</i>	
Family Tellinidae	
<i>Macoma balthica</i>	in swimming pool
<i>Macoma calcarea</i>	dredged
Family Veneridae	
<i>Mercenaria mercenaria</i>	Northern Quahog. one, swimming pool, 1986
<i>Pitar morrhuanus</i>	False Quahog. 25m
Order Myoidea	
Family Hiatellidae	
<i>Cyrtodaria siliqua</i>	Northern Propellerclam. 85', valves only
<i>Hiatella arctica</i>	Boring Clam. low intertidal zone, in byssus threads of mussels, kelp holdfasts, crevices
Family Myidae	
<i>Mya truncata</i>	Truncate Softshell Clam. 125', shell gravel
<i>Mya arenaria</i>	Softshell Clam. a few, swimming pool
Family Teredinidae	
<i>Teredo navalis</i>	Shipworm. woodboring
<i>Psiloteredo megotara</i>	Shipworm. woodboring, in barge, 1982
Order Pholadomyoidea	
Family Pandoridae	
<i>Pandora gouldiana</i>	10m, muddy sand
Class Scaphopoda (tuskshells)	
Order Dentaliida	
Family Dentaliidae	
<i>Antalis entale</i>	(= <i>Antalis entalis</i> , <i>Dentalium entale</i>). dredged
Class Gastropoda (snails, nudibranchs)	

Order Patellogastropoda	
Family Lottiidae	
<i>Tectura testudinalis</i>	limpet (<i>Acmaea testudinalis</i> , <i>Notoacmaea testudinalis</i>). Common, intertidal
Order Archaeogastropoda	
Family Calliostomatidae	
<i>Calliostoma occidentale</i>	found by SCUBA
Family Fissurellidae	
<i>Puncturella noachina</i>	Keyhole Limpet. found by SCUBA
Family Trochidae	
<i>Margarites costalis</i>	found by SCUBA
<i>Margarites groenlandicus</i>	found by SCUBA
<i>Margarites helycinus</i>	
<i>Solariella obscura</i>	
Family Turbinidae	
<i>Moelleria costulata</i>	found by SCUBA
Order Neotaenioglossa	
Family Aporrhaididae	
<i>Aporrhais occidentalis</i>	55', shell sand
Family Calyptraeidae	
<i>Crepidula fornicata</i>	Slippershell. low intertidal, subtidal
<i>Crepidula plana</i>	subtidal, on other mollusc shells
Family Capulidae	
<i>Trichotropis borealis</i>	Boreal Hairysnail. found by SCUBA
Family Epitoniidae	
<i>Couthouyella striatula</i>	55', Gosport Harbor
<i>Epitonium sp.</i>	found by SCUBA
Family Lamellariidae	
<i>Marsenina glabra</i>	found by SCUBA
Family Littorinidae	
<i>Lacuna vincta</i>	Little Chink. on kelp, <i>Chondrus crispus</i>
<i>Littorina littorea</i>	Common Periwinkle. Common, protected intertidal rocks
<i>Littorina obtusata</i>	Rockweed Periwinkle. abundant on intertidal rockweeds, <i>Chondrus crispus</i>
<i>Littorina saxatilis</i>	Rough Periwinkle. abundant in spray and barnacle zones
Family Naticidae	
<i>Euspira heros</i>	Moonsnail (= <i>Lunatia heros</i>). subtidal sand
Family Rissoidae	
<i>Alvania areolata</i>	found by SCUBA
<i>Alvania exarata</i>	found by SCUBA
<i>Cingula aculeatus</i>	not in Turgeon or ITIS, needs verification
<i>Onoba mighelsi</i>	(= <i>Alvania mighelsii</i>). found by SCUBA, not in Turgeon, needs verification
Family Skeneopsidae	
<i>Skeneopsis planorbis</i>	intertidal, on <i>Mytilus edulis</i> clumps
Family Velutinidae	
<i>Velutina sp.</i>	(<i>V. laevigata</i> in collection). 100', gravel
Order Neogastropoda	
Family Buccinidae	
<i>Buccinum undatum</i>	Waved Whelk. subtidal
<i>Colus pygmaeus</i>	Pygmy Whelk. subtidal, 150', sandy mud
<i>Colus stimpsoni</i>	Stimpson's whelk. subtidal, 150', sandy mud
<i>Neptunea lyrata decemcostata</i>	Ten-Ridged Whelk. subtidal
Family Columbellidae	
<i>Mitrella dissimilis</i>	found by SCUBA
<i>Mitrella truncata</i>	found by SCUBA, not in Turgeon or ITIS, needs verification
Family Muricidae	
<i>Boreotrophon clathratus</i>	found by SCUBA
<i>Nucella lapillus</i>	Dogwinkle (= <i>Thais lapillus</i>). abundant in intertidal barnacle zone
Family Nassariidae	
<i>Nassarius trivittatus</i>	Threeline Mudsnailed (= <i>Ilyanassa trivittata</i>). 30', sand

Order Heterostropha	
Family Pyramidellidae	
<i>Odostomia producta</i>	(= <i>Pyramidella producta</i>). found by SCUBA
<i>Odostomia sulcosa</i>	found by SCUBA
Family Mathildidae	
<i>Turritellopsis acicula</i>	Needle Turretsnail. found by SCUBA
Order Cephalaspidea (bubble shells)	
Family Cylichnidae	
<i>Cylichna gouldii</i>	found by SCUBA
Family Diaphanidae	
<i>Diaphana minuta</i>	found by SCUBA
Family Philinidae	
<i>Philine lima</i>	found by SCUBA
Order Thecosomata (shelled pteropods)	
Family Limacinidae	
<i>Limacina bulimoides</i>	(= <i>Spiratella bulimoides</i>). plankton, September
<i>Limacina trochiformis</i>	plankton net
Order Gymnosomata (sea butterflies)	
Family Clionidae	
<i>Clione limacina</i>	plankton, early June
Order Sacoglossa (sea hares)	
Family Elysiidae	
<i>Elysia chlorotica</i>	
Family Stiligeridae	
<i>Alderia modesta</i>	25', by cribs, on <i>Codium fragile</i>
<i>Placida dendritica</i>	on <i>Codium fragile</i> and <i>Bryopsis</i>
Order Nudibranchia (sea slugs)	
Family Aeolidiidae	
<i>Aeolidia papillosa</i>	feeds on the anenome <i>Metridium senile</i>
Family Chromodorididae	
<i>Cadlina laevis</i>	Common, subtidal, feeds on the sponge <i>Halisarca</i>
Family Dendronotidae	
<i>Dendronotus frondosus</i>	feeds on the hydroid <i>Obelia</i>
<i>Dendronotus robustus</i>	feeds on hydroids <i>Clava</i> and <i>Sarsia</i> , found by SCUBA
Family Dotoidae	
<i>Doto coronata</i>	feeds on the hydroid <i>Obelia</i>
<i>Doto formosa</i>	feeds on the hydroid on <i>Eudendrium gracilis</i> , found by SCUBA
Family Eubranchidae	
<i>Eubranchus exiguus</i>	early summer, feeds on the hydroid <i>Obelia</i>
<i>Eubranchus olivaceus</i>	early summer, feeds on the hydroid <i>Obelia</i>
<i>Eubranchus pallidus</i>	subtidal
<i>Eubranchus tricolor</i>	100', deep subtidal, Star Island
Family Facelinidae	
<i>Cratena pilata</i>	
<i>Facelina bostoniensis</i>	
Family Flabellinidae	
<i>Flabellina gracilis</i>	(= <i>Coryphella gracilis</i>). feeds on the hydroid <i>Eudendrium gracilis</i> . for information on this genus, see Kuzirian, 1979
<i>Flabellina nobilis</i>	(= <i>Coryphella nobilis</i>). feeds on hydroids <i>Tubularia</i> , <i>Halecium</i> , and <i>Sertularia</i> . see Kuzirian, 1977
<i>Flabellina pellucida</i>	subtidal, feeds on thecate hydroids
<i>Flabellina salmonacea</i>	(= <i>Coryphella salmonacea</i>). feeds on the tunicate <i>Aplidium pallidum</i>
<i>Flabellina verrucosa</i>	(= <i>Coryphella verrucosa</i>). feeds on hydroids <i>Tubularia</i> , <i>Hydractinia</i> and the tunicate <i>Botryllus</i>
Family Goniodorididae	
<i>Ancula gibbosa</i>	
<i>Okenia ascidicola</i>	feeds on solitary tunicates; Gosport Harbor, Haley's Cove area (Smuttynose Island)
Family Onchidorididae	

<i>Adalaria proxima</i>	
<i>Acanthodoris pilosa</i>	
<i>Onchidoris bilamellata</i>	(= <i>O. fusca</i>).
<i>Onchidoris muricata</i>	(= <i>O. aspera</i>).
Family Polyceridae	
<i>Polycera dubia</i>	(= <i>Palio dubia</i> , <i>Palio lessonii</i>).
Family Tergipedidae	
<i>Cuthona concinna</i>	
<i>Cuthona gymnota</i>	(= <i>Catriona aurantia</i>).
<i>Cuthona nana</i>	feeds on Hydractinia; Haley's Cove (Smuttynose Island)
<i>Cuthona viridis</i>	(= <i>Cratena viridis</i>). subtidal
<i>Tenellia adspersa</i>	(= <i>Tenellia fuscata</i> or <i>Tergipes despectus</i>). more estuarine but occasional
<i>Tenellia fuscata</i>	
Order Archaeopulmonata	
Family Ellobiidae	
<i>Ovatella myosotis</i>	
Order Stylommatophora (land snails)	
Family Arionidae	
<i>Arion subfuscus</i>	Dusky Slug. near Crystal Lake, 1993
Family Cochlicopidae	
<i>Cochlicopa lubrica</i>	(= <i>Cionella lubrica</i>). near Crystal Lake, 1993
Family Discidae	
<i>Anguispira alternata</i>	Flamed Tigersnail. shells only
<i>Discus catskillensis</i>	shells only
Family Helicodiscidae	
<i>Helicodiscus parallelus</i>	shells only
Family Polygyridae	
<i>Triodopsis albolabris</i>	near Crystal Lake, 1993
Family Pupillidae	
<i>Vertigo ventricosa</i>	near Crystal Lake, 1994
Family Valloniidae	
<i>Vallonia pulchella</i>	near Crystal Lake, 1995
Family Zonitidae	
<i>Zonitoides nitidus</i>	near Crystal Lake, 1996
Class Cephalopoda	
Order Teuthida	
Family Ommastrephidae	
<i>Illex illecebrosus</i>	Northern Shortfin Squid. neritic
Order Octopoda	
Family Octopodidae	
<i>Bathypolypus arcticus</i>	250', mud and sand, 1994
<i>Octopus sp.</i>	250', mud
Phylum Ectoprocta (moss animals, bryozoans)	
Class Gymnolaemata	
Order Cyclostomata	
Family Crisiidae	
<i>Crisia eburnea</i>	
Family Lichenoporidae	
<i>Lichenopora hispida</i>	gill net
<i>Lichenopora verrucaria</i>	found by SCUBA
Family Oncousoeciidae	
<i>Oncousoecia diastroporides</i>	
Family Tubuliporidae	
<i>Idmonea atlantica</i>	gill net
<i>Tubulipora flabellaris</i>	
Order Cheilostomata	
Family Aeteidae	
<i>Aetea recta</i>	
Family Bugulidae	
<i>Bugula fulva</i>	found by SCUBA, cribs, 1994

<i>Bugula simplex</i>	180', gravel
<i>Bugula turrita</i>	lower littoral, August
<i>Dendrobaenia murrayana</i>	found by SCUBA
Family Calloporidae	
<i>Amphiblestrum flemingi</i>	found by SCUBA, cribs, 1994
<i>Callopora aurita</i>	
<i>Callopora craticula</i>	
<i>Callopora lineata</i>	found by SCUBA, cribs, 1994
<i>Tegella unicornis</i>	(= formerly <i>Membranipora unicornis</i>). found by SCUBA
Family Cribrilinidae	
<i>Cribrilina annulata</i>	
<i>Cribrilina punctata</i>	
Family Cryptosulidae	
<i>Cryptosula pallasiana</i>	intertidal, on mussel shells
Family Electridae	
<i>Electra monostachys</i>	
<i>Electra pilosa</i>	
Family Gigantoporidae	
<i>Cylindroporella tubulosa</i>	gill net
Family Hippoporinidae	
<i>Hippoporina propinqua</i>	found by SCUBA
Family Hippothoidae	
<i>Hippothoa hyalina</i>	
Family Membraniporidae	
<i>Membranipora membranacea</i>	on <i>Laminaria saccharina</i> , first seen 1987
Family Microporellidae	
<i>Microporella ciliata</i>	
Family Mucronellidae	
<i>Porella minuta</i>	found by SCUBA
Family Schizoporellidae	
<i>Schizoporella unicornis</i>	
Family Scrupariidae	
<i>Eucratea loricatea</i>	50', August, 1988
<i>Scruparia ambigua</i>	
<i>Scruparia chelata</i>	
Family Scrupocellariidae	
<i>Caberea ellisii</i>	70', on pebbles or <i>Modiolus modiolus</i> shells
Family Stomachetosellidae	
<i>Stomachetosella sp.</i>	found by SCUBA
Order Ctenostomata	
Family Alcyonidiidae	
<i>Alcyonidium sp.</i>	
Family Flustrellidridae	
<i>Flustrellidra hispida</i>	
Family Vesiculariidae	
<i>Bowerbankia gracilis</i>	
<i>Bowerbankia imbricata</i>	
Phylum Brachiopoda (lampshells)	
Class Articulata	
Order Terebratulida	
Family Cancellothyrididae	
<i>Terebratulina septentrionalis</i>	60-100', rock faces; 137', gravel; often encrusted with <i>Lophon</i> sponge
Phylum Echinodermata (spiny-skinned animals)	
Class Asteroidea (seastars)	
Order Paxillosida	
Family Gonioplectinidae	
<i>Ctenodiscus crispatus</i>	Mud Star. 137', mud
Order Valvatida	
Family Goniasteridae	

<i>Hippasteria phrygiana</i>	Horse Star. 100', gravel
Order Spinulosida	
Family Poraniidae	
<i>Porania insignis</i>	subtidal
Family Pterasteridae	
<i>Pteraster militaris</i>	
Family Solasteridae	
<i>Crossaster papposus</i>	Spiny Sun Star. 85', gravel
<i>Solaster endeca</i>	Sun Star. 137', gravel
Family Echinasteridae	
<i>Henricia sanguinolenta</i>	Blood Star. 30-137', rocks
Order Forcipulatida	
Family Asteriidae	
<i>Asterias forbesi</i>	Forbes' Seastar. less common, subtidal
<i>Asterias rubens</i>	Common Seastar (includes <i>A. vulgaris</i>).
<i>Leptasterias littoralis</i>	Common below 10 m
<i>Leptasterias tenera</i>	150', gravel
<i>Stephanasterias albula</i>	found by SCUBA
Class Ophiuroidea (brittle stars)	
Order Ophiurida	
Family Amphiuridae	
<i>Amphipholis squamata</i>	Pygmy Brittle Star. low intertidal, tiny
Family Ophiactidae	
<i>Ophiopholis aculeata</i>	Daisy Brittle Star. Common, intertidal
Family Ophiuridae	
<i>Ophiura sarsi</i>	100', gravel, trawl site
Class Echinoidea	
Order Echinoida	
Family Strongylocentrotidae	
<i>Strongylocentrotus droebachiensis</i>	Green Sea Urchin. low intertidal pools, subtidal rocks and "urchin barrens"
Order Clypeasteroida	
Family Echinarachniidae	
<i>Echinarachnius parma</i>	Sand Dollar. subtidal sand
Class Holothuroidea (sea cucumbers)	
Order Dendrochirotida	
Family Cucumariidae	
<i>Cucumaria frondosa</i>	Common Sea Cucumber. low intertidal, subtidal
<i>Duasmodyctyla commune</i>	230', gravel, August
Family Psolidae	
<i>Psolus fabricii</i>	subtidal
Order Apodida	
Family Chiridotidae	
<i>Chiridota laevis</i>	Transparent Sea Cucumber. found by SCUBA
Phylum Chaetognatha (arrowworms)	
Class Sagittoidea	
Order Aphragmophora	
Family Sagittidae	
<i>Sagitta sp.</i>	NP
Phylum Hemichordata (acornworms)	
Class Enteropneusta	
Family Harrimaniidae	
<i>Saccoglossus kowalevskii</i>	mud
Phylum Chordata (chordates)	
Subphylum Tunicata (tunicates or sea squirts)	
Class Ascidiacea	
Order Enterogona	
Suborder Aplousobranchia	
Family Didemnidae	

<i>Didemnum albidum</i>	White Crust Tunicate. subtidal, gravel
<i>Didemnum vexillum</i>	Common, subtidal
<i>Diplosoma listerianum</i>	Common, first seen in Gosport Harbor 1993
Family Polyclinidae	
<i>Aplidium pallidum</i>	Sea Pork (includes <i>Amaroucium constellatum</i> and <i>Amaroucium stellatum</i>).
Suborder Phlebobranchia	
Family Ascidiidae	
<i>Ascidia callosa</i>	found by SCUBA
Family Cionidae	
<i>Ciona intestinalis</i>	found by SCUBA
Family Corellidae	
<i>Chelyosoma macleayanum</i>	found by SCUBA
Order Pleurogona	
Suborder Stolidobranchia	
Family Molgulidae	
<i>Bostrichobranchus pilularis</i>	found by SCUBA
<i>Molgula citrina</i>	found by SCUBA
<i>Molgula complanata</i>	found by SCUBA
<i>Molgula manhattensis</i>	
Family Pyuridae	
<i>Boltenia echinata</i>	found by SCUBA
<i>Boltenia ovifera</i>	Sea Potato. 100', hard bottom
<i>Halocynthia pyriformis</i>	Sea Peach. found by SCUBA
<i>Botrylloides violaceus</i>	first seen on cribs, 1987
Family Styelidae	
<i>Botryllus schlosseri</i>	Brown Crust Tunicate.
<i>Dendrodoa carnea</i>	gravel, subtidal
Class Appendicularia	
Order Copelata	
Family Oikopleuridae	
<i>Oikopleura sp.</i>	
Subphylum Vertebrata (vertebrates)	
Class Myxini	
Order Myxiniformes	
Family Myxinidae	
<i>Myxine glutinosa</i>	Atlantic Hagfish. 400', mud
Class Cephalaspidomorphi	
Order Petromyzontiformes	
Family Petromyzontidae	
<i>Petromyzon marinus</i>	Sea Lamprey.
Class Chondrichthyes	
Order Lamniformes	
Family Cetorhinidae	
<i>Cetorhinus maximus</i>	Basking Shark. basking at surface, August
Order Carcharhiniformes	
Family Carcharhinidae	
<i>Prionace glauca</i>	Blue Shark.
Order Squaliformes	
Family Squalidae	
<i>Squalus acanthias</i>	Spiny Dogfish.
Order Rajiformes	
Family Rajidae	
<i>Raja radiata</i>	Clearnose Skate.
<i>Leucoraja erinacea</i>	Little Skate.
<i>Leucoraja ocellata</i>	Winter Skate.
<i>Amblyraja senta</i>	Thorny Skate. 100', hard bottom
<i>Malacoraja eglanteria</i>	Smooth Skate.
Class Actinopterygii	
Order Clupeiformes	
Family Clupeidae	

<i>Alosa aestivalis</i>	Blueback Herring.
<i>Alosa mediocris</i>	Hickory Shad. trawled
<i>Alosa pseudoharengus</i>	Alewife. trawled
<i>Alosa sapidissima</i>	American Shad.
<i>Clupea harengus</i>	Atlantic Herring.
Order Gadiformes	
Family Phycidae	
<i>Enchelyopus cimbrius</i>	Fourbeard Rockling. seine; 5mm fry in tide pools, late summer
<i>Urophycis chuss</i>	Red Hake.
<i>Urophycis regia</i>	Spotted Hake. trawled
<i>Urophycis tenuis</i>	White Hake.
Family Merlucciidae	
<i>Merluccius bilinearis</i>	Silver Hake.
Family Gadidae	
<i>Brosme brosme</i>	Cusk.
<i>Gadus morhua</i>	Atlantic Cod. hand line
<i>Melanogrammus aeglefinus</i>	Haddock.
<i>Pollachius virens</i>	Pollock. hand line, gill net
Order Lophiiformes	
Family Lophiidae	
<i>Lophius americanus</i>	Goosefish. post-larvae in kelp; adults benthic
Order Atheriniformes	
Family Atherinopsidae	
<i>Menidia menidia</i>	Atlantic Silverside.
Order Cyprinodontiformes	
Family Fundulidae	
<i>Fundulus heteroclitus</i>	Mummichog. tide pools
<i>Fundulus majalis</i>	Striped Killifish.
Order Gasterosteiformes	
Family Gasterosteidae	
<i>Gasterosteus aculeatus</i>	Threespine Stickleback. tide pools
<i>Pungitius pungitius</i>	Ninespine Stickleback. tide pools
Family Syngnathidae	
<i>Hippocampus erectus</i>	Lined Seahorse. once, found by SCUBA
<i>Syngnathus fuscus</i>	Northern Pipefish. once, gill net
Order Scorpaeniformes	
Family Scorpaenidae	
<i>Helicolenus dactylopterus</i>	Blackbelly Rosefish.
<i>Sebastes norvegicus</i>	Golden Redfish.
Family Triglidae	
<i>Prionotus carolinus</i>	Northern Searobin. once, gill net
Family Cottidae	
<i>Myoxocephalus aeneus</i>	Grubby. gill net
<i>Myoxocephalus octodecemspinosus</i>	Longhorn Sculpin.
<i>Myoxocephalus scorpius</i>	Shorthorn Sculpin.
<i>Triglops nybelini</i>	Bigeye Sculpin.
Family Hemitripterae	
<i>Hemitripterus americanus</i>	Sea Raven. hand line, gill net
Family Agonidae	
<i>Aspidophoroides monopterygius</i>	Alligatorfish. seine
Family Cyclopteridae	
<i>Cyclopterus lumpus</i>	Lumpfish.
Family Liparidae	
<i>Liparis atlanticus</i>	Atlantic Seasnail. on kelp
Order Perciformes	
Family Moronidae	
<i>Morone saxatilis</i>	Striped Bass. once, 1994; common under dock at night 2005-2007
Family Pomatomidae	
<i>Pomatomus saltatrix</i>	Bluefish. gill net, hand line
Family Carangidae	

<i>Decapterus macarellus</i>	Mackerel Scad. once, rockpool
Family Labridae	
<i>Tautoga onitis</i>	Tautog. gill net
<i>Tautogolabrus adspersus</i>	Cunner.
Family Zoarcidae	
<i>Zoarces americanus</i>	Ocean Pout. hand line
Family Stichaeidae	
<i>Leptoclinus maculatus</i>	Snakeblenny. trawled
<i>Lumpenus lumpretaeformis</i>	Daubed Shanny. trawled
<i>Ulvaria subbifurcata</i>	Radiated Shanny. intertidal, subtidal
Family Pholidae	
<i>Pholis gunnellus</i>	Rock Gunnel. intertidal, subtidal
Family Anarhichadidae	
<i>Anarhichas lupus</i>	Atlantic Wolffish. found by SCUBA
Family Ammodytidae	
<i>Ammodytes sp.</i>	Sand Lance. once, pollock stomach
Family Scombridae	
<i>Scomber scombrus</i>	Atlantic Mackerel. hand line
<i>Thunnus thynnus</i>	Bluefin Tuna. once, 1966
Family Stromateidae	
<i>Peprilus triacanthus</i>	Butterfish.
Order Pleuronectiformes	
Family Scopthalmidae	
<i>Scophthalmus aquosus</i>	Windowpane.
Family Paralichthyidae	
<i>Paralichthys oblongus</i>	Fourspot Flounder.
Family Pleuronectidae	
<i>Glyptocephalus cynoglossus</i>	Witch Flounder.
<i>Hippoglossoides platessoides</i>	American Plaice.
<i>Hippoglossus hippoglossus</i>	Atlantic Halibut.
<i>Limanda ferruginea</i>	Yellowtail Flounder. 127', gravel
<i>Pseudopleuronectes americanus</i>	Winter Flounder. trawled, hand line
Order Tetraodontiformes	
Family Molidae	
<i>Mola mola</i>	Ocean Sunfish. rare; drifting near surface
Class Amphibia	
Order Caudata	
Family Plethodontidae	
<i>Plethodon cinereus</i>	Eastern Red-Backed Salamander. discovered 1987, under boards in central valley, under rocks on Boden Trail
Class Reptilia	
Order Testudines	
Family Dermochelidae	
<i>Dermochelys coriacea</i>	Leatherback Turtle. once, August 1981
Family Emydidae	
<i>Chrysemys picta</i>	Painted Turtle. by Hamilton/Laughton bridge, first observed 2005
Order Squamata	
Family Colubridae	
<i>Liochlorophis vernalis</i>	Smooth Green Snake. central valley, since 1930s
<i>Storeria dekayi</i>	Dekay's Brown Snake. central valley, since 1930s
Class Aves	
Order Gaviiformes	
Family Gaviidae	
<i>Gavia stellata</i>	Red-throated Loon. Common
<i>Gavia immer</i>	Common Loon. Common
Order Podicipediformes	
Family Podicipedidae	
<i>Podiceps auritus</i>	Horned Grebe. Uncommon
<i>Podiceps grisegena</i>	Red-necked Grebe. Common
<i>Podilymbus podiceps</i>	Pied-billed Grebe. once, 1992

Order Procellariiformes	
Family Procellariidae	
<i>Fulmarus glacialis</i>	Northern Fulmar. rare
<i>Puffinus gravis</i>	Greater Shearwater. rare
<i>Puffinus griseus</i>	Sooty Shearwater. Uncommon
<i>Puffinus puffinus</i>	Manx Shearwater. rare
Family Hydrobatidae	
<i>Oceanites oceanicus</i>	Wilson's Storm-Petrel. Common
<i>Oceanodroma leucorhoa</i>	Leach's Storm-Petrel. Common
Order Pelecaniformes	
Family Sulidae	
<i>Morus bassanus</i>	Northern Gannet. Uncommon
Family Phalacrocoracidae	
<i>Phalacrocorax carbo</i>	Great Cormorant. Uncommon, a few linger all summer
<i>Phalacrocorax auritus</i>	Double-crested Cormorant. ~1700 nesting pairs on Duck Island, ~300 pairs on Seavey's Island
Order Ciconiiformes	
Family Ardeidae	
<i>Botaurus lentiginosus</i>	American Bittern. rare
<i>Ixobrychus exilis</i>	Least Bittern. rare
<i>Ardea herodias</i>	Great Blue Heron. Common
<i>Ardea alba</i>	Great Egret. 1-2 nesting pairs on Appledore Island occasionally
<i>Egretta thula</i>	Snowy Egret. ~20 nesting pairs on Appledore Island
<i>Egretta caerulea</i>	Little Blue Heron. 1-2 nesting pairs on Appledore Island occasionally
<i>Egretta tricolor</i>	Tricolored Heron. Rare, may occasionally breed on Appledore Island
<i>Bubulcus ibis</i>	Cattle Egret. Rare
<i>Butorides striatus</i>	Green-backed Heron. Rare
<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron. ~50 nesting pairs on Appledore Island
<i>Nycticorax violacea</i>	Yellow-crowned Night-Heron. Rare
Family Threskiornithidae	
<i>Eudocimus albus</i>	White Ibis. Twice, 1984, 1993
<i>Plegadis falcinellus</i>	Glossy Ibis. ~50 nesting pairs on Appledore Island
Order Anseriformes	
Family Anatidae	
<i>Chen caerulescens</i>	Snow Goose. Uncommon
<i>Branta canadensis</i>	Canada Goose. Common; 1 nesting pair on Smuttynose, Appledore or Duck Island
<i>Branta bernicla</i>	Brant. Common
<i>Aix sponsa</i>	Wood Duck. Rare
<i>Anas crecca</i>	Green-winged Teal. Uncommon
<i>Anas rubripes</i>	American Black Duck. ~2 nesting pairs on Appledore Island
<i>Anas platyrhynchos</i>	Mallard. ~4 nesting pairs on Appledore Island
<i>Anas acuta</i>	Northern Pintail. Rare
<i>Anas discors</i>	Blue-winged Teal. Uncommon
<i>Anas strepera</i>	Gadwall. Rare
<i>Aythya marila</i>	Greater Scaup. Once
<i>Somateria mollissima</i>	Common Eider. ~50 nests with young on Appledore Island, 1994
<i>Somateria spectabilis</i>	King Eider. Rare
<i>Histrionicus histrionicus</i>	Harlequin Duck. Once
<i>Clangula hyemalis</i>	Long-tailed Duck. Abundant
<i>Melanitta nigra</i>	Black Scoter. Uncommon
<i>Melanitta perspicillata</i>	Surf Scoter. Common
<i>Melanitta fusca</i>	White-winged Scoter. Common
<i>Bucephala clangula</i>	Common Goldeneye. Abundant
<i>Bucephala albeola</i>	Bufflehead. Abundant
<i>Lophodytes cucullatus</i>	Hooded Merganser. Once
<i>Mergus serrator</i>	Red-breasted Merganser. abundant

<i>Oxyura jamaicensis</i>	Ruddy Duck. Once
Order Falconiformes	
Family Cathartidae	
<i>Cathartes aura</i>	Turkey Vulture. Rare
Family Pandionidae	
<i>Pandion haliaetus</i>	Osprey. Uncommon
Family Accipitridae	
<i>Haliaeetus leucocephalus</i>	Bald Eagle. Occasional juveniles
<i>Circus cyaneus</i>	Northern Harrier. Uncommon
<i>Accipiter striatus</i>	Sharp-shinned Hawk. Uncommon
<i>Accipiter cooperii</i>	Cooper's Hawk. Rare
<i>Accipiter gentilis</i>	Northern Goshawk. Rare
<i>Buteo lineatus</i>	Red-shouldered Hawk. Rare
<i>Buteo platypterus</i>	Broad-winged Hawk. Uncommon
<i>Buteo lagopus</i>	Rough-legged Hawk. Uncommon
Family Falconidae	
<i>Falco sparverius</i>	American Kestrel . Uncommon
<i>Falco columbarius</i>	Merlin. Common
<i>Falco peregrinus</i>	Peregrine Falcon. Uncommon
Order Gruiformes	
Family Rallidae	
<i>Rallus longirostris</i>	Clapper Rail. Once
<i>Rallus limicola</i>	Virginia Rail. Once, 1991
<i>Porzana carolina</i>	Sora. Rare
<i>Fulica americana</i>	American Coot. Once
<i>Gallinula chloropus</i>	Common Moorhen. Once, 1991
Order Charadriiformes	
Family Charadriidae	
<i>Pluvialis squatarola</i>	Black-bellied Plover. Common
<i>Pluvialis dominica</i>	American Golden-Plover. Rare
<i>Charadrius semipalmatus</i>	Semipalmated Plover. Common
<i>Charadrius wilsonia</i>	Wilson's Plover. Once
<i>Charadrius vociferus</i>	Killdeer. Rare
Family Haematopidae	
<i>Haematopus palliatus</i>	American Oystercatcher. once
Family Scolopacidae	
<i>Tringa melanoleuca</i>	Greater Yellowlegs. Common
<i>Tringa flavipes</i>	Lesser Yellowlegs. Common
<i>Tringa solitaria</i>	Solitary Sandpiper. Rare
<i>Tringa semipalmatus</i>	Willet. Rare
<i>Actitis macularius</i>	Spotted Sandpiper. No nests on Appledore Island since 1988
<i>Bartramia longicauda</i>	Upland Sandpiper. Rare
<i>Numenius phaeopus</i>	Whimbrel. Uncommon
<i>Limosa fedoa</i>	Marbled Godwit. Once
<i>Arenaria interpres</i>	Ruddy Turnstone. Common
<i>Calidris pusilla</i>	Semipalmated Sandpiper. Common
<i>Calidris mauri</i>	Western Sandpiper. Rare
<i>Calidris minutilla</i>	Least Sandpiper. Common
<i>Calidris fuscicollis</i>	White-rumped Sandpiper. Rare
<i>Calidris melanotos</i>	Pectoral Sandpiper. Abundant
<i>Calidris maritima</i>	Purple Sandpiper. Abundant
<i>Philomachus pugnax</i>	Ruff. Once
<i>Limnodromus griseus</i>	Short-billed Dowitcher. Common
<i>Gallinago gallinago</i>	Common Snipe. Rare
<i>Scolopax minor</i>	American Woodcock. Rare
<i>Phalaropus lobatus</i>	Red-necked Phalarope. Rare
<i>Phalaropus fulicaris</i>	Red Phalarope. Rare
Family Laridae	
<i>Stercorarius parasiticus</i>	Parasitic Jaeger. Once
<i>Stercorarius pomarinus</i>	Pomarine Jaeger. Once
<i>Larus atricilla</i>	Laughing Gull. Rare

<i>Larus fuscus</i>	Lesser Black-backed Gull. One. First seen 2007.
<i>Larus philadelphia</i>	Bonaparte's Gull. Rare
<i>Larus delawarensis</i>	Ring-billed Gull. Uncommon
<i>Larus argentatus</i>	Herring Gull. ~1500 nesting pairs on Appledore Island, ~2500 nesting pairs at Isles of Shoals
<i>Larus glaucoides</i>	Iceland Gull. Common
<i>Larus hyperboreus</i>	Glaucous Gull. Common
<i>Larus marinus</i>	Great Black-backed Gull . ~800 nesting pairs on Appledore Island, ~2500 Isles of Shoals
<i>Rissa tridactyla</i>	Black-legged Kittiwake. Uncommon
<i>Sterna dougallii</i>	Roseate Tern. Rare
<i>Sterna hirundo</i>	Common Tern. Common
<i>Sterna forsteri</i>	Forster's Tern. Once
<i>Sterna paradisaea</i>	Artic Tern. Common
<i>Sternula antillarum</i>	Least Tern. Once
Family Alcidae	
<i>Alle alle</i>	Dovekie. Rare
<i>Uria aalge</i>	Common Murre. Rare
<i>Alca torda</i>	Razorbill. Rare
<i>Cephus grylle</i>	Black Guillemot. Smuttynose; 1 nesting pair on Appledore Island 2001, 1 pair Star Island 1985
<i>Fratercula arctica</i>	Atlantic Puffin. Rare
Order Columbiformes	
Family Columbidae	
<i>Columba livia</i>	Rock Dove. Rare
<i>Streptopelia risoria</i>	Ringed Turtle Dove. Once, probable escape
<i>Zenaida macroura</i>	Mourning Dove. Common; 1 nesting pair on Appledore Island
Order Cuculiformes	
Family Cuculidae	
<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo. Uncommon
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo. Uncommon
Order Strigiformes	
Family Strigidae	
<i>Bubo scandiacus</i>	Snowy Owl. Regular
<i>Athene cunicularia</i>	Burrowing Owl. Once
<i>Asio otus</i>	Long-eared Owl. Once
<i>Asio flammeus</i>	Short-eared Owl. Rare
<i>Aegolius acadicus</i>	Northern Saw-whet Owl. Rare
Order Caprimulgiformes	
Family Caprimulgidae	
<i>Chordeiles minor</i>	Common Nighthawk. Uncommon
<i>Caprimulgus carolinensis</i>	Chuck-will's-widow. Twice
Order Apodiformes	
Family Apodidae	
<i>Chaetura pelagica</i>	Chimney Swift. Uncommon
Family Trochilidae	
<i>Archilochus colubris</i>	Ruby-throated Hummingbird. Common
Order Coraciiformes	
Family Alcedinidae	
<i>Megaceryle alcyon</i>	Belted Kingfisher. Uncommon
Order Piciformes	
Family Picidae	
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker. Rare
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker. Uncommon
<i>Picoides pubescens</i>	Downy Woodpecker. Uncommon
<i>Picoides villosus</i>	Hairy Woodpecker. Rare
<i>Colaptes auratus</i>	Northern Flicker. Abundant
Order Passeriformes	
Family Tyrannidae	
<i>Contopus cooperi</i>	Olive-sided Flycatcher. Rare
<i>Contopus virens</i>	Eastern Wood-Pewee. Common

<i>Empidonax flaviventris</i>	Yellow-bellied Flycatcher. Common
<i>Empidonax virescens</i>	Acadian Flycatcher. Rare
<i>Empidonax alnorum</i>	Alder Flycatcher. Common
<i>Empidonax traillii</i>	Willow Flycatcher. Rare
<i>Empidonax minimus</i>	Least Flycatcher. Common
<i>Sayornis phoebe</i>	Eastern Phoebe. Common
<i>Myiarchus cinerascens</i>	Ash-throated Flycatcher. Once
<i>Myiarchus crinitus</i>	Great Crested Flycatcher. Common
<i>Tyrannus verticalis</i>	Western Kingbird. Occasional, early September
<i>Tyrannus tyrannus</i>	Eastern Kingbird. 2-3 nesting pairs on Appledore Island
Family Alaudidae	
<i>Eremophila alpestris</i>	Horned Lark. Common
Family Hirundinidae	
<i>Progne subis</i>	Purple Martin. Rare
<i>Tachycineta bicolor</i>	Tree Swallow. ~4 nesting pairs on Appledore Island
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow. Rare
<i>Riparia riparia</i>	Bank Swallow. Rare
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow. Uncommon
<i>Hirundo rustica</i>	Barn Swallow. ~20 nesting pairs on Appledore Island
Family Corvidae	
<i>Cyanocitta cristata</i>	Blue Jay. Common
<i>Corvus brachyrhynchos</i>	American Crow. Uncommon
<i>Corvus corax</i>	Common Raven. Uncommon, first seen 2007
Family Paridae	
<i>Poecile atricapillus</i>	Black-capped Chickadee. Uncommon
Family Sittidae	
<i>Sitta canadensis</i>	Red-breasted Nuthatch. Common
<i>Sitta carolinensis</i>	White-breasted Nuthatch. Rare
Family Certhiidae	
<i>Certhia americana</i>	Brown Creeper. Common
Family Troglodytidae	
<i>Thryothorus ludovicianus</i>	Carolina Wren. 2 nesting pairs on Appledore Island?
<i>Troglodytes aedon</i>	House Wren. Common
<i>Troglodytes troglodytes</i>	Winter Wren. Uncommon
<i>Cistothorus platensis</i>	Sedge Wren. Rare
<i>Cistothorus palustris</i>	Marsh Wren. Rare
Family Regulidae	
<i>Regulus satrapa</i>	Golden-crowned Kinglet. Uncommon
<i>Regulus calendula</i>	Ruby-crowned Kinglet. Common
Family Sylviidae	
<i>Polioptila caerulea</i>	Blue-gray Gnatcatcher. Uncommon
Family Turdidae	
<i>Sialia sialis</i>	Eastern Bluebird. Rare
<i>Catharus fuscescens</i>	Veery. Common
<i>Catharus minimus</i>	Gray-cheeked Thrush. Common
<i>Catharus ustulatus</i>	Swainson's Thrush. Common
<i>Hylocichla mustelina</i>	Wood Thrush. Uncommon
<i>Turdus migratorius</i>	American Robin. Uncommon
Family Mimidae	
<i>Dumatella carolinensis</i>	Gray Catbird. ~7 nesting pairs on Appledore Island
<i>Mimus polyglottos</i>	Northern Mockingbird. Uncommon, occasionally breeds at Isles of Shoals, Star Island
	Brown Thresher. Uncommon
<i>Toxostoma rufum</i>	
Family Motacillidae	
<i>Anthus spinoletta</i>	Water Pipit. Uncommon
Family Bombycillidae	
<i>Bombycilla cedrorum</i>	Cedar Waxwing. Common
Family Laniidae	
<i>Lanius excubitor</i>	Northern Shrike. Once
<i>Lanius ludovicianus</i>	Loggerhead Shrike. Once
Family Sturnidae	
<i>Sturnus vulgaris</i>	European Starling. ~3 nesting pairs on Appledore Island

Family Vireonidae

Vireo griseus
Vireo solitarius
Vireo flavifrons
Vireo gilvus
Vireo philadelphicus
Vireo olivaceus

White-eyed Vireo. Rare
 Blue-headed Vireo. Common
 Yellow-throated Vireo. Rare
 Warbling Vireo. Common
 Philadelphia Vireo. Common
 Red-eyed Vireo. Common

Family Parulidae

Vermivora pinus
Vermivora chrysoptera
Vermivora peregrina
Vermivora celata
Vermivora ruficapilla
Parula americana
Dendroica petechia
Dendroica pensylvanica
Dendroica magnolia
Dendroica tigrina
Dendroica caerulescens
Dendroica virens
Dendroica fusca
Dendroica dominica
Dendroica pinus
Dendroica discolor
Dendroica palmarum
Dendroica castanea
Dendroica striata
Dendroica cerulea
Mniotilta varia
Setophaga ruticilla
Protonotaria citrea
Helminthos vermivorum
Seiurus aurocapilla
Seiurus noveboracensis
Seiurus motacilla
Oporonis formosus
Oporonis agilis
Oporonis philadelphia
Geothlypis trichas

Blue-winged Warbler. Uncommon
 Golden-winged Warbler. Rare
 Tennessee Warbler. Uncommon
 Orange-crowned Warbler. Rare
 Nashville Warbler. Uncommon
 Northern Parula. Common
 Yellow Warbler. ~4 nesting pairs on Appledore Island
 Chestnut-sided Warbler. Common
 Magnolia Warbler. Abundant, spring
 Cape May Warbler. Uncommon
 Black-throated Blue Warbler. Common
 Black-throated Green Warbler. Common
 Blackburnian Warbler. Common
 Yellow-throated Warbler. Rare
 Pine Warbler. Rare
 Prairie Warbler. Uncommon
 Palm Warbler. Rare
 Bay-breasted Warbler. Common
 Blackpoll Warbler. Common
 Cerulean Warbler. Rare
 Black-and-white Warbler. Common
 American Redstart. Abundant (no confirmed breeders)
 Prothonotary Warbler. Rare
 Worm-eating Warbler. Rare
 Ovenbird. Common
 Northern Waterthrush. Abundant, fall
 Louisiana Waterthrush. Twice, 1987 and 1999
 Kentucky Warbler. Rare
 Connecticut Warbler. Rare
 Mourning Warbler. Common
 Common Yellowthroat. ~15 nesting pairs on Appledore Island
 Hooded Warbler. Rare
 Wilson's Warbler. Common
 Canada Warbler. Common
 Yellow-breasted Chat. Uncommon

Family Thraupidae

Piranga rubra
Piranga olivacea

Summer Tanager. Rare
 Scarlet Tanager. Common

Family Cardinalidae

Cardinalis cardinalis
Pheucticus ludovicianus
Passerina caerulea
Passerina cyanea
Passerina ciris
Spiza americana

Northern Cardinal. Uncommon
 Rose-breasted Grosbeak. Common
 Blue Grosbeak. Rare
 Indigo Bunting. Uncommon
 Painted Bunting. Once, 2002
 Dickcissel. Rare

Family Emberizidae

Pipilo erythrophthalmus
Spizella arborea
Spizella passerina
Spizella pallida
Spizella pusilla
Pooecetes gramineus
Chondestes grammacus

Eastern Towhee. Uncommon
 American Tree Sparrow. Uncommon
 Chipping Sparrow. Common
 Clay-colored Sparrow. Rare
 Field Sparrow. Uncommon
 Vesper Sparrow. Rare
 Lark Sparrow. Rare

<i>Passerculus sandwichensis</i>	Savannah Sparrow. Common
<i>Passerculus sandwichensis princeps</i>	Ipswich Sparrow. Once
<i>Ammodramus savannarum</i>	Grasshopper Sparrow. Rare
<i>Ammodramus henslowii</i>	Henslow's Sparrow. Once
<i>Ammodramus nelsoni</i>	Nelson's Sharp-tailed Sparrow. Rare
<i>Ammodramus caudacutus</i>	Saltmarsh Sharp-tailed Sparrow. Rare
<i>Ammodramus maritimus</i>	Seaside Sparrow. Rare
<i>Passerella iliaca</i>	Fox Sparrow. Uncommon
<i>Melospiza melodia</i>	Song Sparrow. ~14 nesting pairs on Appledore Island
<i>Melospiza lincolni</i>	Lincoln's Sparrow. Uncommon
<i>Melospiza georgiana</i>	Swamp Sparrow. Uncommon
<i>Zonotrichia albicollis</i>	White-throated Sparrow. Common
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow. Uncommon
<i>Junco hyemalis</i>	Dark-eyed Junco. Uncommon
<i>Calcarius lapponicus</i>	Lapland Longspur. Uncommon
<i>Plectrophenax nivalis</i>	Snow Bunting. Uncommon
Family Icteridae	
<i>Dolichonyx oryzivorus</i>	Bobolink. Common
<i>Agelaius phoeniceus</i>	Red-winged Blackbird. ~7 nesting pairs on Appledore Island
<i>Sturnella magna</i>	Eastern Meadowlark. Rare
<i>Xanthocephalus xanthocephalus</i>	Yellow-headed Blackbird. Rare
<i>Euphagus carolinus</i>	Rusty Blackbird. Common
<i>Quiscalus quiscula</i>	Common Grackle. ~3 nesting pairs on Appledore Island
<i>Molothrus ater</i>	Brown-headed Cowbird. ?
<i>Icterus spurius</i>	Orchard Oriole. Rare
<i>Icterus galbula</i>	Baltimore Oriole. Abundant
Family Fringillidae	
<i>Pinicola enucleator</i>	Pine Grosbeak. Uncommon
<i>Carpodacus purpureus</i>	Purple Finch. Common
<i>Carpodacus mexicanus</i>	House Finch. Uncommon has bred
<i>Loxia curvirostra</i>	Red Crossbill. Uncommon
<i>Loxia leucoptera</i>	White-winged Crossbill. Uncommon
<i>Carduelis flammea</i>	Common Redpoll. Common
<i>Carduelis pinus</i>	Pine Siskin. Uncommon
<i>Carduelis tristis</i>	American Goldfinch. Uncommon
<i>Coccothraustes vespertinus</i>	Evening Grosbeak. Rare
Family Passeridae	
<i>Passer domesticus</i>	House Sparrow. Twice
Class Mammalia	
Order Cetacea	
Family Balaenopteridae	
<i>Balaenoptera acutorostrata</i>	Minke Whale. offshore
<i>Balaenoptera borealis</i>	Sei Whale. several, 1986
<i>Balaenoptera physalus</i>	Fin Whale. single or in small groups, sometimes within 100 meters off shore
<i>Megaptera novaeangliae</i>	Humpback Whale. seen from vessels south and east of Isles of Shoals
Family Balaenidae	
<i>Eubalaena glacialis</i>	Northern Atlantic Right Whale. Uncommon, presumed mother and calf pairs seen between Isles of Shoals and Jeffrey's Ledge
Family Delphinidae	
<i>Globicephala melas</i>	Pilot Whale. Rare
<i>Lagenorhynchus acutus</i>	Atlantic White-sided Dolphin. Occasional, in pods of 30-40 animals
Order Carnivora	
Family Phocoenidae	
<i>Phocoena phocoena</i>	Harbor Porpoise. washed up dead, Appledore Island, summer, 1978
Family Phocidae	
<i>Phoca vitulina</i>	Harbor Seal. about 120 animals at Duck Island in April. Numbers dwindle late spring; a few present in summer.

Halichoerus grypus
Order Rodentia
Family Muridae

Ondatra zibethicus

Rattus norvegicus

Peromyscus sp.

Order Chiroptera

Family Vespertilionidae

Lasiurus borealis

Lasionycteris noctivagans

Myotis lucifugus

Number of seals increases again in August
Gray Seal. Common since 2000, Duck Island

Muskrat. Probably introduced in mid-1940s. Abundant on all islands.

Norway Rat. Common on Appledore.

White-footed Mouse. Once, trapped 1970s.

Red Bat. Regular fall migrant, no voucher specimen

Silver-haired Bat. frequently captured in mist nets, no voucher specimen

Little Brown Bat. status unclear, no voucher specimen

APPENDIX 1—ORGANISMS OBSERVED DURING COASTAL MUDFLAT TRIPS

The following have been recorded during regular Shoals Marine Laboratory field trips to the coast, especially the Sagamore mud flats and Rye Harbor; they have not been found in the vicinity of the Isles of Shoals, hence are not in the preceding species list.

Phylum Chlorophyta

Melosira moniliformis

Percusaria percusaria

***Spirulina* sp.**

Vaucheria littorea

Phylum Phaeophyta

Fucus vesiculosus ecad ***spiralis***

tidal marshes

Ascophyllum nodosum ecad ***scorpioides***

tidal marshes

Phylum Nemertea

Micrura leidy

Phylum Mollusca

Geukensia demissus

Ribbed Mussel. tidal marsh banks

Crassostrea virginica

Virginia Oyster

Nessarius obsoletus

Mud Snail. estuarine mudflats

Phylum Annelida

Arabella iricolor

mudflats

Arenicola marina

Lugworm. mudflats

Clymanella torquata

Bamboo Worm. low intertidal, sandy mud

Glycera dibranchiata

Blood Worm. mudflats

Lumbrineris fragilis

Lumbrineris tenuis

Nephytes bucera

mudflats

Phylum Arthropoda

Haustorius arenarius

sand

Phylum Chordata, class Osteichthyes

Anguilla rostrata

American Eel.

APPENDIX 2—ORGANISMS FOUND BY TRAWLERS OUTSIDE THE THREE-MILE RADIUS OF THE ISLES OF SHOALS

Editions of the SML checklist prior to 1984 included many animals with the notation T, indicating that they were obtained from trawlers or other commercial fishing vessels at the laboratory. Although we sometimes know the source when we collect organisms from the deck of a trawler (i.e. near Cashes' Ledge), usually the source is unknown. To be more precise about what occurs within a three-mile radius of the islands, these have been removed from 1984 and more recent editions and are appended below.

Phylum Porifera

Suberites ficus

Phylum Cnidaria

Hormathia nodosa

Balticina finmarchica

(Cashes' Ledge)

Phylum Priapulida

Priapulidus caudatus

Phylum Mollusca

Natica clausa

Scaphander punctostriatus

(shell only)

Yoldia thraciaetormis

(shell only)

Phylum Arthropoda

Panalus borealis

(Northern Prawn) collected 1974

Geryon quinquedens

Libinia dubia

(Cashes' Ledge)

Phylum Echinodermata

Caudina arenata

Pentagonaster granularis

(Cashes' Ledge)

Psilaster andromeda

(Cashes' Ledge)

Ophioderma sp.

(Cashes' Ledge)

Phylum Chordata, class Chondrichthyes

Mustelus canis

(Smooth Dogfish)

Torpedo nobiliana

(Atlantic Torpedo)

Raja laevis

(Barndoor Skate)

APPENDIX 3—EPHEMERAL VASCULAR PLANTS

These vascular plants represent either single specimens that apparently are no longer present, or represent species of plants found growing from time to time in the wrack line of various beaches, thus constituting an ephemeral part of the flora. Families are alphabetized for the reader's convenience.

Family Caprifoliaceae
Sambucus pubens

Elder. reported by G. Boden, not found since

Family Liliaceae
Scilla siberica

Siberian Scilla. persisted east of Celia Thaxter foundation; found in April and May, but not found since 1986

Family Pinaceae
Pinus strobus

White Pine. not found since 1985

Family Rosaceae
Prunus avium.

reported by G. Boden, not found since

Family Solanaceae
Datura stramonium
Lycopersicum esculentum

Jimsonweed. Once, among cobbles, Broad Cove
Tomato. blooming in wrack line, Sandpiper Beach

Family Ericaceae
Vaccinium macrocarpon

(= *Oxycoccus macrocarpus*). reported by G. Boden, not seen recently

Family Poaceae
Festuca filiformis

(= *Festuca capillata*). reported by G. Boden, not found recently

Family Crassulaceae
Sedum aizoon

reported by G. Boden, not found recently

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