

A Checklist of the
INTRODUCED
MARINE AND ESTUARINE ORGANISMS
ON
THE COAST OF MAINE, U.S.A.

A PRELIMINARY CHECKLIST

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**Introduced
Marine and Estuarine Organisms
on the Coast of Maine, U.S.A.**

This regional list for the coast of Maine is derived from a larger work (commenced in 1975) monographing the introduced and cryptogenic marine organisms from Nova Scotia to Long Island Sound.

Many colleagues and students have been involved in this work over the past 29 years. August 2003 surveys of selected sites along the Maine coast (led by Dr. Judith Pederson and colleagues; personal communications) added several new taxa to this working list. These sites included South Portland (Port Harbor Marine floats and retaining walls), Portland (Portland Yacht Services floats), and South Freeport (Brewer South Freeport floats).

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DATA SUMMARY

**MARINE AND ESTUARINE INVASIONS
OF THE MAINE COAST**

| Taxon | Introduced Species | Establishment Uncertain | TOTAL |
|----------------------|-----------------------|----------------------------|-----------|
| Protista | 1 | | 1 |
| Invertebrates | 25 | 1 | 26 |
| Algae | 7 | 1 | 8 |
| <u>TOTAL:</u> | 33 | 2 | 35 |

Data Calculations:

| | |
|-----------------|----------|
| Platyhelminthes | 2 |
| Anthozoa | 1 |
| Hydrozoa | 1 |
| Polychaeta | 2 |
| Gastropoda | 1 (1 EU) |
| Bivalvia | 2 |
| Amphipoda | 1 |
| Isopoda | 2 |
| Mysidacea | 1 |
| Decapoda | 2 |
| Insecta | 1 |
| Bryozoa | 3 |
| Ascidiacea | 6 |
| Algae | 7 (1 EU) |

**INTRODUCED
MARINE AND ESTUARINE ORGANISMS
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A PRELIMINARY CHECKLIST

EU = Establishment Uncertain

| Species | Common Name | Status | Origin |
|---|----------------------------|-------------------|----------------------|
| PROTISTA | | | |
| <i>Bonamia ostrea</i> first Maine record: 1991 | Bonamia oyster disease | Introduced | south Atlantic coast |
| PLATYHELMINTHES | | | |
| Turbellaria | | | |
| <i>Convoluta convoluta</i> | Flatworm | Introduced | Europe |
| CNIDARIA (COELENTERATA) | | | |
| Anthozoa | | | |
| <i>Diadumene lineata</i> (= <i>Haliplanella luciae</i> ; = <i>Sagartia luciae</i>) | Orange-striped sea anemone | Introduced | Asia |
| Hydrozoa | | | |
| <i>Cordylophora caspia</i> (= <i>C. lacustris</i>) | Hydroid | Introduced | Ponto-Caspian |
| ANNELIDA | | | |
| Polychaeta | | | |
| <i>Boccardia proboscidea</i> first record: Maine, 1990 | Spionid worm | Introduced | American Pacific |

Janua pagenstecheri Spirorbid worm **Introduced** Europe
 considered native to the eastern Atlantic based on the evolutionary physiological studies of Knight-Jones et al.

| Species | Common Name | Status | Origin |
|---|------------------------|----------------------|------------------------|
| MOLLUSCA | | | |
| Gastropoda | | | |
| <i>Littorina littorea</i> | Periwinkle | Introduced | Europe/Northern Canada |
| Recent genetic work on American <i>L. littorea</i> populations pertains only to the history of populations in northeastern Canada (Gulf of St. Lawrence); all populations from Nova Scotia south date from the 1850s and later and are considered non-native. | | | |
| <i>Tritonia plebeia</i> | Sea slug | Introduced/EU | Europe |
| Bivalvia | | | |
| <i>Ostrea edulis</i> | Edible oyster | Introduced | Europe |
| <i>Teredo navalis</i> | Naval shipworm | Introduced | Pacific Ocean |
| CRUSTACEA | | | |
| Gammaridea | | | |
| <i>Corophium volutator</i> | Corophium | Introduced | Europe |
| Caprellidea | | | |
| <i>Caprella muticum</i> | Skeleton shrimp | Introduced | Asia |
| Isopoda | | | |
| <i>Ligia oceanica</i> | Rock louse, sea slater | Introduced | Europe |
| <i>Ianiropsis</i> sp. | Isopod | Introduced | Europe/Asia |
| Mysidacea | | | |

| | | | |
|-------------------------------|---------------------|-------------------|--------|
| <i>Praunus flexuosus</i> | Opossum shrimp | Introduced | Europe |
| Decapoda | | | |
| <i>Carcinus maenas</i> | European shore crab | Introduced | Europe |
| <i>Hemigrapsus sanguineus</i> | Asian shore crab | Introduced | Asia |
| INSECTA | | | |
| <i>Anisolabis maritima</i> | Maritime earwig | Introduced | Europe |

| Species | Common Name | Status | Origin |
|--|--------------------|-------------------|------------------|
| BRYOZOA (Ectoprocta) | | | |
| Ctenostomata | | | |
| <i>Alcyonidium</i> sp. | Bryozoan | Introduced | Europe? |
| Cheilostomata | | | |
| <i>Membranipora membranacea</i> | Kelp bryozoan | Introduced | Europe |
| <i>Bugula neritina</i> | Bugula | Introduced | Origin uncertain |
| first Maine record: 2003 | | | |
| UROCHORDATA: ASCIDIACEA | | | |
| <i>Botryllus schlosseri</i> | Compound seasquirt | Introduced | Europe |
| <i>Botrylloides violaceus</i> | Compound seasquirt | Introduced | Asia |
| <i>Didemnum</i> sp. | Compound seasquirt | Introduced | Pacific |
| <i>Diplosoma listerianum</i> | Compound seasquirt | Introduced | Pacific |
| (= <i>Diplosoma macdonaldi</i> of authors) | | | |
| <i>Styela clava</i> | Seasquirt | Introduced | Asia |
| <i>Molgula manhattensis</i> | Seasquirt | Introduced | Europe |

RHODOPHYTA

| | | | |
|---|----------|----------------------|-------------|
| <i>Porphyra suborbiculata</i> | Red alga | Introduced | China-Japan |
| <i>Bonnemaisonia hamifera</i> | Red alga | Introduced | Japan |
| = <i>Asparagopsis hamifera</i> = <i>Trailliella intricata</i> | | | |
| <i>Lomentaria clavellosa</i> | Red alga | Introduced/EU | Europe |
| Maine populations require confirmation | | | |
| <i>Lomentaria orcadensis</i> | Red alga | Introduced | [Europe] |
| <i>Antithamnion pectinatum</i> | Red alga | Introduced | Japan |
| = <i>Antithamnion nipponicum</i> | | | |
| <i>Polysiphonia harveyi</i> | Red alga | Introduced | Japan |
| <i>Dumontia contorta</i> | Red alga | Introduced | Europe |

| Species | Common Name | Status | Origin |
|---------|-------------|--------|--------|
|---------|-------------|--------|--------|

CHLOROPHYTA

| | | | |
|-------------------------------------|--------------------|-------------------|------|
| <i>Codium fragile tomentosoides</i> | Dead Man's Fingers | Introduced | Asia |
|-------------------------------------|--------------------|-------------------|------|

HIGHER PLANTS IN MARITIME AND SALT MARSH HABITATS

| | | | |
|--|------------|-------------------|--------|
| <i>Cakile maritima</i> | Sea rocket | Introduced | Europe |
| Maine populations require confirmation | | | |