

plain purplish brown, and others inhabiting deep pools with a heavy growth of *Zostera* were, in life, of a vivid green, with about four horizontal stripes of lighter green, silvery patches shining through on the inferior stripes. As usual, two brown ocelli margined with a ring of red were placed one at a distance of its own diameter behind the margin of opercular flap, the other as far below the dorsal fin and under its posterior half. In the specimens examined the dorsal fin rays vary from V, XXVIII, 6 to V, XXXI, 9, the anal usually having twenty-four articulate rays, occasionally as few as twenty-three or as many as twenty-six, the anal spines always numbering two.

SAN DIEGO, CAL., *May 15, 1883.*

**CATALOGUE OF MOLLUSCA AND ECHINODERMATA DREDGED ON
THE COAST OF LABRADOR BY THE EXPEDITION UNDER THE
DIRECTION OF MR. W. A. STEARNS, IN 1882.**

By KATHARINE J. BUSH.

The collection upon which the following catalogue is based was obtained by the expedition of 1882, under the direction of Mr. W. A. Stearns. Part of the specimens were sent to the Peabody Museum of Yale College by Messrs. B. S. Barrows and J. A. Allen, and the rest to the National Museum by Mr. Stearns.

The dredging was done mostly by Mr. Stearns, Mr. B. S. Barrows, and Mr. Edwin R. Flint; but Messrs. J. A. Allen and Charles L. Flint, jr., assisted in this work.

The dredgings were made during the month of August, in shallow water, at different points along the coast included between Forteau Bay and Dead Island. The principal localities are L'anse au Loup, north latitude $51^{\circ} 33'$, west longitude $56^{\circ} 48'$; Henley Harbor, about north latitude $52^{\circ} 05'$, west longitude $55^{\circ} 51'$; Dead Island, near Square Island, north latitude $52^{\circ} 48'$, west longitude $55^{\circ} 48'$.

The nomenclature adopted is mostly the same as that of the Preliminary Check-list of the Marine Invertebrata of the Atlantic Coast, and the Catalogue of Marine Mollusca by Prof. A. E. Verrill.* The names used in Binney's edition of Gould's Invertebrata of Massachusetts are added in parenthesis when different from those adopted.

For such species as are not included in Gould's report, references have been given to at least one work in which the species is described or figured.

A list of the species found by Prof. A. S. Packard, jr.,† during the summer of 1864, but not obtained by the Stearns expedition, has been appended to the catalogues, both of mollusca and echinodermata, to make the faunal lists more complete.

* Preliminary Check-list of the Marine Invertebrata of the Atlantic Coast, New Haven, Conn., 1879. Catalogue of Marine Mollusca, in *Trans. Conn. Acad.*, vol. v, part 2, April, 1882.

† Recent Invertebrate Fauna of Labrador, 1865.

MOLLUSCA.

CEPHALOPODA.

Ommastrephes illecebrosus (Les.).

Several adult specimens were taken at L'anse au Loup, in 15 fathoms, and Fox Harbor, near the shore.

GASTROPODA.

Bela scalaris (Möll.) H. & A. Adams.

Bela scalaris Verrill, Cat. Mar. Mollusca, in Trans. Conn. Acad., vol. v, part ii, p. 471, pl. LVII, figs. 12, 12a.

Occurred at Forteau Bay, 20 fathoms; L'anse au Loup, 8 to 15 fathoms; Henley Harbor, 3 to 15 fathoms.

Bela rosea Sars.

Bela harpularia, G. O. Sars, Moll. Reg. Arct. Norvegiæ, p. 234, pl. 16, fig. 17, pl. ix, figs. 3 a-c (dentition), 1878 (*non* Couthony).

Bela harpularia, var. *rosea* G. O. Sars, Moll. Reg. Arct. Norvegiæ, p. 234, pl. 23, fig. 10.

Bela rosea Verrill, Cat. Mar. Mollusca, p. 485.

Forteau Bay, 20 fathoms; L'anse au Loup, 10 fathoms; Henley Harbor, 10 to 15 fathoms; Temple Bay, 10 fathoms; Dead Island, near Square Island, 2 to 4 fathoms.

Bela Sarsii Verrill.

Bela cancellata G. O. Sars, Moll. Reg. Arct. Norvegiæ, p. 224, pl. 23, fig. 3 (*non* Mighels).

Bela Sarsii Verrill, Cat. Mar. Mollusca, p. 484.

PLATE IX, FIG. 8.

Several specimens dredged at Forteau Bay, 20 fathoms, L'anse au Loup, 10 to 15 fathoms, have been directly compared with shells from Tromso, sent by Dr. Friele from the museum at Bergen. This is a rare species on the American coast, having rarely been found before except at Murray Bay, Canada. (Dawson, coll.)

Bela exarata (Möller) H. & A. Adams.

Bela exarata Verrill, Cat. Mar. Mollusca, p. 467.

Three were dredged at L'anse au Loup, with sand and kelp.

Bela mitrula Lovén.

Bela mitrula G. O. Sars, Moll. Reg. Arctiæ Norvegiæ, p. 233, pl. 23, fig. 9.

Bela concinnula, var. *acuta* Verrill, Cat. Mar. Mollusca, p. 470.

Several specimens, agreeing closely with those of Europe, sent by Dr. Friele, were found at Forteau Bay, 20 fathoms; L'anse au Loup, 10 to 15 fathoms.

Bela pleurotomaria (Couth.) Adams.*Bela pleurotomaria* Verrill, Cat. Mar. Mollusca, p. 478.

PLATE IX, FIG. 7.

L'anse au Loup, 10 to 15 fathoms; Henley Harbor, 10 to 15 fathoms; Temple Bay, 10 fathoms; Dead Island, near Square Island, 1 to 4 fathoms.

Bela decussata (Couth.) H. & A. Adams.*Bela decussata* Verrill, Cat. Mar. Mollusca, p. 479, pl. 43, fig. 13.

Forteau Bay, 20 fathoms; L'anse au Loup, 10 fathoms. One unusually large dead specimen at Henley Harbor, 10 to 15 fathoms.

Bela incisula V.*Bela incisula* Verrill, Cat. Mar. Mollusca, p. 461, pl. 43, fig. 12, pl. 57, fig. 14.

PLATE IX, FIG. 10.

Most common at L'anse au Loup, 10 to 15 fathoms; Forteau Bay, 20 fathoms; Henley Harbor, 3 to 15 fathoms; Dead Island, near Square Island, 2 to 4 fathoms.

Bela bicarinata (Couth.) V.*Bela bicarinata* Verrill, Cat. Mar. Mollusca, p. 482, pl. 57, figs. 16, 16a.

Not uncommon at Forteau Bay, 20 fathoms; L'anse au Loup, 10 to 15 fathoms. One dead specimen at Henley Harbor, 10 to 15 fathoms.

Bela bicarinata, var. *violacea* (Migh. & Adams).*Bela bicarinata* var. *violacea* Verrill, Cat. Mar. Mollusca, p. 483.

Common at all localities in 1 to 20 fathoms.

Admete Couthouyi (Jay) Ad. (= *A. viridula* Gld.).

L'anse au Loup, 10 to 15 fathoms; Henley Harbor, 3 to 15 fathoms; Temple Bay, 10 fathoms; Dead Island, near Square Island, 1 to 4 fathoms.

Sipho lividus (Mörch).*Sipho lividus* Verrill, Cat. Mar. Mollusca, p. 507.

PLATE IX, FIG. 12.

Two good, though dead, specimens were found at Henley Harbor, in 8 fathoms, and Dead Island, near Square Island, in 1 to 4 fathoms. Hitherto recorded from the Grand Bank of Newfoundland; Orphan Bank, in the Gulf of Saint Lawrence; and off Metis, mouth of the Saint Lawrence River.

Tritonofusus cretaceus (Reeve).*Buccinum cretaceum* Packard, Can. Natr., vol. viii, p. 417, pl. 2, fig. 6, 1863;

Mem. Boston Soc. Nat. Hist., i, p. 288, pl. 7, fig. 7, 1867.

Tritonofusus Kröyeri Verrill, Cat. Mar. Mollusca, p. 510 (*non* Möller sp.).

A few examples of this interesting species, obtained at Henley Harbor and Temple Bay, in 3 to 10 fathoms, agree exactly with the Canadian form, from off Metis.

Buccinum undatum Linné.

This species occurs abundantly along the coast in 1 to 15 fathoms, but is a much larger and smoother variety than the more typical form found at Eastport, Me. There is also a marked difference in color; most specimens being, in alcohol, of a dark reddish brown.

Buccinum Donovanii Gray.

A large and a small specimen of this characteristic species were found at Henley Harbor, at low water and 15 fathoms, comparing well with shells from off Metis.

Buccinum Tottenii Stimp.

Buccinum Tottenii Stimpson, Review Northern Buccinums, Can. Natur., 1865, p. 23 (sep. cop.).

PLATE IX, FIG. 13.

Three shells corresponding to the Canadian form from off Metis, occurred at Henley Harbor and Temple Bay, in 8 to 15 fathoms.

Buccinum ciliatum (Fabr.) Möller.

Buccinum ciliatum Stimpson, Review Northern Buccinums, Can. Natur., 1865, p. 11 (sep. cop.).

PLATE IX, FIG. 14.

This species was found in 3 to 8 fathoms at Henley Harbor. Hitherto recorded from the Grand Bank, Gulf of Saint Lawrence, Greenland, and other Arctic localities.

Trophon clathratus (Linné) Möll.

L'anse au Loup, 10 to 15 fathoms; Henley Harbor, 3 to 15 fathoms; Temple Bay, 10 fathoms.

Astyris rosacea (Gould) H. & A. Adams. (= *Columbella rosacea* Gld.).

PLATE IX, FIG. 6.

A few good specimens were taken at L'anse au Loup, in 8 fathoms; Henley Harbor, in 3 to 8 fathoms. They differ from more typical shells of this species from New England, in having the transverse ribs more distinct on about four of the upper whorls below the nucleus. They are absent from the two last whorls.

Natica clausa Brod. & Sowerby.

Henley Harbor, 8 fathoms; Dead Island, near Square Island, 1 to 4 fathoms. One unusually large specimen measured 30^{mm} in length, 28^{mm} in breadth.

Lunatia Groenlandica (Möll.) H. & A. Ad.

Henley Harbor, in 3 to 8 fathoms.

Velutina lævigata (L.) Gould (= *V. haliotoidea* Gld.).

A very few small specimens were found at Henley Harbor, 3 to 8 fathoms; Dead Island, near Square Island, 1 to 4 fathoms, mud.

Littorinella minuta (Totten) Stimp. (= *Rissoa minuta* Gld.).

Fox Harbor, Saint Lewis Sound, 1 to 4 fathoms, sand; one dead.

Cingula castanea (Möll.) Verrill.

Cingula castanea G. O. Sars, Moll. Reg. Arct. Norvegiæ, p. 174, pl. 10, figs. 1 a, 1 b, 1878; Verrill, Cat. Mar. Mollusa, pl. 43, fig. 1.

PLATE IX, FIG. 9.

Dead Island, near Square Island, 1 to 4 fathoms, hard bottom.

Littorina littorea (Linné) Menke.

Very rare at so northern a latitude.

Littorina rudis (Matou) Gould.

Much eroded specimens occurred at all the localities.

Lacuna vineta (Mont.) Turton.

Common at Forteau Bay, 20 fathoms; L'anse au Loup, 8 to 15 fathoms; Fox Harbor, Saint Lewis Sound, 1 to 4 fathoms; Dead Island, near Square Island, 1 to 4 fathoms. The larger specimens measure about 13^{mm} in length and 8^{mm} in breadth.

Turritella erosa Conth.

Common at all the localities.

Turritella reticulata Migh.

L'anse au Loup, 10 fathoms; Henley Harbor, 3 to 15 fathoms; Temple Bay, 10 fathoms; Dead Island, near Square Island, 2 to 4 fathoms.

Turritellopsis acicula Sars.

Turritella acicula Stimp., Proc. Boston Soc. Nat. Hist., vol. iv, p. 15, 1851; Shells of New England, p. 35, pl. 1, fig. 5.

Turritellopsis acicula G. O. Sars, Moll. Reg. Arct. Norvegiæ, pl. 10, figs. 14-a, b.

A few good, though dead, specimens were found at Dead Island, near Square Island, 1 to 4 fathoms, mud.

Trichotropis borealis Brod. & Sow.

L'anse au Loup, 8 to 10 fathoms; Henley Harbor, 3 to 15 fathoms; Temple Bay, 5 to 10 fathoms; Dead Island, near Square Island, 2 to 4 fathoms.

Aporthais occidentalis Beck.

Forteau Bay, 20 fathoms; L'anse au Loup, 10 to 20 fathoms; Henley Harbor, 15 fathoms, living. Temple Bay; Fox Harbor, Saint Lewis Sound, 8 fathoms; Dead Island, near Square Island, 2 to 4 fathoms, dead.

Margarita helicina (Fabr.) Möll.

L'anse au Loup, 10 fathoms, one dead. Very common, in 1 to 4 fathoms, at Fox Harbor, Saint Lewis Sound, and Dead Island, near Square Island.

Vol. VI, No. 16. Washington, D. C. Nov. 27, 1883.

Margarita cinerea (Couth.) Gould.

Dredged in abundance on sandy bottoms in 1 to 20 fathoms.

Margarita Grœnlandica (Gm.) Möll. (= *M. undulata* Gld.).

Common at all the localities. At Dead Island, near Square Island, 1 to 4 fathoms, the smooth variety was found.

Margarita argentata Gould.

One dead specimen was taken off Dead Island, near Square Island, in 2 to 4 fathoms, nullipore bottom.

Machæroplax varicosa (Migh.) Friele (= *Margarita varicosa* Gould).

Forteau Bay, 20 fathoms; L'anse au Loup, 10 to 15 fathoms, sand, in abundance; Dead Island, near Square Island, 1 to 4 fathoms.

Machæroplax obscura (Couth.) Friele (= *Margarita obscura* Gld.).

One specimen, living, at L'anse au Loup, 15 fathoms, sand.

Puncturella Noachina (L.) Lowe (= *Cemoria Noachina* Gld.).

Henley Harbor, 3 to 8 fathoms; Dead Island, near Square Island, 2 to 4 fathoms.

Acmæa testudinalis (Müll.) Han. (= *Tectura testudinalis* Gld.).

L'anse au Loup, 8 to 15 fathoms; Henley Harbor, 3 to 15 fathoms; Temple Bay, 5 to 10 fathoms; Fox Harbor, Saint Lewis Sound, 1 to 5 fathoms; Dead Island, near Square Island, 1 to 4 fathoms.

Acmæa rubella (Fabr.) Dall.

Tectura rubella G. O. Sars, Moll. Reg. Aret. Norvegiæ, p. 121, pl. 8, figs. 5 a, b.
PLATE IX, FIGS. 5, 5a.

One living specimen was taken at Temple Bay, rocky bottom.

Lepeta cæca (Müll.) Gray.

Henley Harbor, 3 to 15 fathoms; Temple Bay, 5 to 10 fathoms.

Tonicella marmorea (Fabr.) Carp. (= *Chiton marmorcus* Gld.).

Occurred in abundance at L'anse au Loup, low-water mark to 8 fathoms; Henley Harbor, 3 to 15 fathoms; Temple Bay, 10 fathoms; Dead Island, near Square Island, 1 to 4 fathoms.

Trachydermon ruber (Linné) Carp. (= *Chiton ruber* Gld.).

Found with the preceding, but not in such abundance.

Trachydermon albus (Linné) Carp. (= *Chiton albus* Gld.).

A few were found at L'anse au Loup, 8 to 10 fathoms, rocks, sand, and mud.

Menestho albula (Fabr.) Möll. (*non* Gld.).

PLATE IX, FIG. 11.

One young, living, at L'anse au Loup, 10 fathoms, mud and kelp.
This specimen does not agree precisely with Greenland examples.

Cylichna alba (Brown) Lovén.

Dead Island, near Square Island, 2 to 4 fathoms, nullipore bottom.

Coryphella diversa (Couth.) Verrill.

Two specimens. L'anse au Loup.

LAMELLIBRANCHIATA.

Saxicava arctica (Linné) Desh.

Common at most of the localities.

Cyrtodaria siliqua (Speng.) Woodw. (= *Glycymeris siliqua* Gld.).

One very young specimen. L'anse au Loup, 10 fathoms, mud and kelp.

Mya arenaria Linné.

Very common in 1 to 5 fathoms.

Mya truncata Linné.

L'anse au Loup, 10 fathoms, with sand and kelp, one young specimen.

Lyonsia arenosa (Möller) Mörch.

One valve was found in Temple Bay, in 10 fathoms, mud.

Periploma papyracea (Say) Conrad; Verrill (= *Anatina papyracea* Gld.).

One valve of a very young specimen was dredged in Henley Harbor, 10 to 15 fathoms.

Macoma fragilis (Fabr.) H. & A. Ad. (= *M. fusca* Gld.).

In abundance in Fox Harbor, Saint Lewis Sound, 1 to 10 fathoms, mud.

Macoma sabulosa (Speng.) Mörch (= *M. proxima* Gld.).

L'anse au Loup, Henley Harbor, Fox Harbor, Dead Island, near Square Island, in 1 to 15 fathoms.

Liocyma fluctuosa Dall (= *Tapes fluctuosa* Gld.).

L'anse au Loup and Henley Harbor, 10 to 15 fathoms.

Cardium ciliatum Fabr. (= *C. Islandicum* Gld.).

Cardium ciliatum Fabr., Fauna Grœnl., p. 410. (1780.)

Cardium Islandicum Gmelin, Syst. Nat., p. 3252. (1792.)

Common in Henley Harbor, 10 to 15 fathoms; Temple Bay, 10 fathoms; Fox Harbor, Saint Lewis Sound, shallow water; Dead Island, near Square Island, 2 to 4 fathoms.

Serripes Grœnlandicus (Gmel.) Beck.

Found in all the localities, in 1 to 15 fathoms.

Cryptodon Gouldii (Phil.) Stimp.

L'anse au Loup, 10 fathoms; Henley Harbor, 3 to 8 fathoms; Dead Island, near Square Island, 1 to 4 fathoms.

Axinopsis orbiculata Sars.

Axinopsis orbiculata G. O. Sars, Moll. Reg. Arct. Norvegiæ, p. 63, pl. 19, figs. 11a-d.

PLATE IX, FIG. 4.

One specimen occurred in Henley Harbor, 10 to 15 fathoms.

Venericardia borealis (Con.) Carp. (= *Caraita borealis* Gld.).

Henley Harbor, 3 to 10 fathoms; Temple Bay, 10 fathoms; Dead Island, near Square Island, 2 to 4 fathoms.

Astarte elliptica (Brown) McGill.

Common in Henley Harbor and Temple Bay, in 5 to 15 fathoms.

Astarte Banksii (Leach) Gray.

In abundance at Henley Harbor, 3 to 15 fathoms; Temple Bay, 10 fathoms; Fox Harbor, Saint Lewis Sound, shallow water.

Astarte arctica (Gray) Forbes & Han.

Astarte lactea Brod. & Sby., Zool. Jour., IV, p. 365, 1828-'29.

Henley Harbor, 10 to 15 fathoms; Temple Bay, rocky bottom; Fox Harbor, Saint Lewis Sound, 3 to 10 fathoms; Dead Island, near Square Island, 2 to 4 fathoms.

Nucula tenuis, var. *inflata* (Hancock).

Henley Harbor, in 3 to 8 fathoms.

Yoldia myalis (Couth.) Stimp.

A very badly worn valve was dredged at L'anse au Loup, in 15 fathoms, sand.

Leda Jacksoni Gould.

Henley Harbor and Temple Bay, in 10 to 15 fathoms.

Leda minuta (Müll.) Möller.

Found with the preceding.

Mytilus edulis Linné.

Henley Harbor, Temple Bay, Fox Harbor, Dead Island, in 1 to 10 fathoms.

Modiolaria nigra (Gray) Lovén.

Several young specimens were found at L'anse au Loup, 10 fathoms.

Modiolaria discors (Linné) Lovén.

Dead Island, near Square Island, in 1 to 4 fathoms.

Modiolaria corrugata (Stimp.) Mörch.

Henley Harbor, in 3 to 8 fathoms.

Crenella faba (Müll.) (= *C. pectinula* Gld.?).

Mytilus faba Fabricius, Fauna Grœnlandica, p. 419.

PLATE IX, FIG. 3.

The young of this species were found at L'anse au Loup, 10 to 15 fathoms, sand, mud, kelp; Fox Harbor, Saint Lewis Island, 1 to 4 fathoms, sand, abundant; Dead Island, near Square Island, shallow water.

Crenella glandula (Totten) H. & A. Ad.

L'anse au Loup, in 8 to 10 fathoms.

Crenella decussata (Mont.) Macg.

Crenella decussata Verrill, Cat. Mar. Mollusca, p. 578, Pl. 44, fig. 7.

PLATE IX, FIG. 2.

Several specimens were found at L'anse au Loup, 10 fathoms; Fox Harbor, Saint Lewis Sound, 3 fathoms.

Pecten Islandicus Müller.

Dead Island, near Square Island, in 1 to 4 fathoms.

Anomia aculeata Müll.

L'anse au Loup, 8 to 15 fathoms; Henley Harbor, 10 to 15 fathoms.

BRACHIOPODA.

Rhynchonella psittacea (Gm.) Owen.

Henley Harbor, 3 to 8 fathoms; Temple Bay, 10 fathoms; Dead Island, near Square Island, 1 to 4 fathoms.

List of Labrador shells recorded by Dr. A. S. Packard, Jr., but not obtained by the Stearns expedition.

GASTROPODA.

Bela cancellata (Migh.) Stimp.

Fusus syrtensis, nov. sp. (Not seen.)

Fusus tornatus Gld. (*Neptunea despecta* (L.) Ad.).

Buccinum tenue Gray.

? *Natica heros* Sowb. (*Lunatia heros* (Say) H. & A. Ad.).

Littorina palliata Gld.

Scalaria Grœnlandica Perry.

Margarita campanulata Morse, nov. sp. (*M. helicina*, var.).

Scissurella crispata Flem.

Adeorbis costulata Stimp. (*Molleria costulata* (Möll.) Jeff., Fr.).

? *Lamellaria perspicua* Lovén. (Not seen.)

- Bulla pertenuis* Migh. (*Diaphana pertenuis* (Migh.) Verrill).
Bulla occulta Migh. (*Cylichna occulta* (Migh.) H. & A. Ad.).
Dendronotus arboreescens Ald. & Han.

PTEROPODA.

- Clione limacina* Phipps (*C. papilionacea* Pallas).
Limacina helicina Phipps.

LAMELLIBRANCHIATA.

- Solen ensis* Linné (*Ensatella Americana* (Gould) Verrill).
Kennerlia glacialis (Leach) Carp.*¹
Thracia Conradi Couth.
Thracia myopsis Beck.
Maetra solidissima Chem. (*Spisula solidissima* (Dillw.) Gray).
Maetra polynema Stimp. (*Spisula ovalis* Gld.).
Mesodesma Jauresii Joannis (*Ceronia deaurata* (Turt.) Stimp.).
Gemma Totteni Stimp. (*Tottenia gemma* (Totten) Perkins).
 ? *Cardium pinnulatum* Conr.*²
Cardium Hayesii Stimp. (*C. ciliatum*, var.).
Yoldia sapotilla Stimp.
Mytilus modiolus Linné (*Modiola modiolus* (Linné) Turton).
Pecten tenuicostatus Mighels.
Limatula sulculus Leach. (Not seen.)

Catalogue of Echinodermata obtained by the Stearns expedition.

Lophothuria Fabricii Verrill.

Psolus Fabricii Duncan & Sladen, Echin. Arctic Sea, p. 10, pl. 1, figs. 9-13, 1881.

Young were found at Henley Harbor and Temple Bay in 8 to 10 fathoms.

Pentacta calcigera Stimp.

Cucumaria calcigera Duncan & Sladen, Echin. Arctic Sea, p. 5, pl. 1, figs. 3-8, 1881.

Fox Harbor, Saint Lewis Sound, in 1 to 3 fathoms. A number of good specimens were without a locality label.

Chirodota læve Grube.

Chirodota lævis Duncan & Sladen, Echin. Arctic Sea, p. 12, pl. 1, figs. 14-19, 1881.

Temple Bay in 5 fathoms; Fox Harbor in 1 fathom; Dead Island, near Square Island, in 2 to 4 fathoms.

*¹ Three specimens, sent to the Peabody Museum of Yale College, were labeled *Pandora trilincata* Say.

*² One specimen labeled *C. pinnulatum* Conr., sent to the Peabody Museum of Yale College = *Cardium ciliatum* Fabr. (young).

Echinarachnius parma Gray.

Common at L'anse au Loup on sandy, muddy, and kelpy bottoms, in 10 to 15 fathoms.

Strongylocentrotus Droebachiensis A. Ag.

Two large specimens were found at L'anse au Loup in 15 fathoms.

Asterias vulgaris Stimp.

Large specimens were found in abundance at low-water mark at Bonne Esperance, Esquimaux Bay.

Asterias polaris (M. & Tr.) Verrill.

Asteracanthion polare Duncan & Sladen, Echin. Arctic Sea, p. 23, pl. 2, figs. 4-8, 1881.

Found in abundance with the preceding. At L'anse au Loup a young specimen was taken in 8 fathoms.

Leptasterias littoralis (Stimp.) Verrill.

Several specimens were found at Dead Island, near Square Island, in 1 to 5 fathoms.

Cribrella sanguinolenta (Müll.) Lützk.

Cribrella sanguinolenta A. Agassiz, North Amer. Star fishes, pl. 18, 1877.

Cribrella oculata Duncan & Sladen, Echin. Arctic Sea, p. 32, pl. 2, figs. 18-21, 1881.

Henley Harbor in 10 to 15 fathoms; Dead Island, near Square Island, in 1 to 5 fathoms.

Crossaster papposus Müll. & Tro.

Crossaster papposus A. Agassiz, North Amer. Star fishes, pl. 12, 1877; Duncan & Sladen, Echin. Arctic Sea, p. 36, pl. 3, figs. 1-4, 1881.

A few specimens were taken in 10 fathoms at Henley Harbor and Temple Bay.

Ophiopholis aculeata Gray.

Ophiopholis bellis Lyman, Cat. Mus. Comp. Zoölogy, No. I, p. 96, pl. 1, figs. 4-6, 1865.

L'anse au Loup in 8 to 15 fathoms; Henley Harbor at low-water mark, and 10 fathoms; Temple Bay in 10 fathoms; Dead Island, near Square Island, in 1 to 5 fathoms. Common.

Amphiura Sundevalli Müll. & Tur.

Amphiura Holbölli Duncan & Sladen, Echin. Arctic Sea, p. 67, pl. 4, figs. 15-17, 1881.

One mutilated specimen was found in 10 to 15 fathoms at Henley Harbor.

Ophioglypha Sarsii (Lützk.) Lym.

Ophioglypha Sarsii Duncan & Sladen, Echin. Arctic Sea, p. 60, pl. 4, figs. 3, 4, 1881.

Two were taken in 10 fathoms at Henley Harbor.

Ophioglypha robusta (Ayres) Lym.

Ophioglypha robusta Duncan & Sladen, Echin. Arctic Sea, p. 62, pl. 4, figs. 5-7, 1881.

L'anse au Loup; Henley Harbor, 10 fathoms; Dead Island, near Square Island, 2 to 4 fathoms.

Ophioglypha nodosa (Lützk.) Lym.

Ophioglypha nodosa Lütken, Addit. ad Hist. Ophiur., pl. 2, figs. 9a, b, 1853.

The most abundant species. L'anse au Loup, Henley Harbor, and Temple Bay, in 10 to 15 fathoms.

List of Labrador Echinoderms recorded by Dr. A. S. Packard, Jr., but not obtained by the Stearns expedition.

Pentaeta frondosa Jæger.

Eupyrigus scaber Lütken.

Myriotrochus Rinkii Steenst.

Asterias grænlandicus Steenst. (*Leptasterias grænlandicus* V.).

Solaster endeca (Linn.) Forbes.

Ophiacantha spinulosa Müll. & Tr. (*O. bidentata* Ljung).

Astrophyton eucnemis Müll. & Tr.

EXPLANATION OF PLATE IX.

FIG. 1.—*Kennerlia glacialis*, X 2. Specimen from Labrador, collected by Prof. A. S. Packard, jr., 1864.

1a. The same. Interior view of another specimen.

2.—*Crenella decussata*, X 6. From Grand Manan, N. B.

3.—*Crenella faba*, X 4. From Labrador.

4.—*Axinopsis orbiculata*, X 8. From Labrador.

5.—*Aemca rubella*, X 4. From Labrador.

5a.—The same specimen. Profile view.

6.—*Astyris rosacea*, X 4. From Labrador.

7.—*Bela pleurotomaria*, X 3. From off Cape Cod.

8.—*Bela Sarsii*, X 4. From Labrador.

9.—*Cingula castanea*, X 8. From Gulf of Saint Lawrence.

10.—*Bela incisula*, X 2. From Eastport, Me.

11.—*Menestho albula*, X 8. From Labrador.

12.—*Sipho lividus*, natural size. From a specimen taken off Metis, Canada, by Principal J. W. Dawson.

13.—*Buccinum Totteni*, natural size. Off Metis, Canada (J. W. Dawson).

14.—*Buccinum ciliatum*, X 2. Rivière du Loup, Canada (J. W. Dawson).

NEW HAVEN, CONN., May 1, 1883.

PLATE IX.

(For text see pages 236-247.)

- FIG. 1.—*Kennerlia glacialis*, twice natural size. Specimen from Labrador, collected by Prof. A. S. Packard, jr., 1864.
- FIG. 1a.—The same. Interior view of another specimen.
- FIG. 2.—*Crenella decussata*, six times natural size. From Grand Manan, New Brunswick.
- FIG. 3.—*Crenella faba*, four times natural size. From Labrador.
- FIG. 4.—*Axinopsis orbiculata*, eight times natural size. From Labrador.
- FIG. 5.—*Acmæa rubella*, four times natural size. From Labrador.
- FIG. 5a.—The same specimen. Profile view.
- FIG. 6.—*Astyris rosacea*, four times natural size. From Labrador.
- FIG. 7.—*Bela pleuromaria*, three times natural size. From off Cape Cod.
- FIG. 8.—*Bela sarsii*, four times natural size. From Labrador.
- FIG. 9.—*Cingula castanea*, eight times natural size. From Gulf of Saint Lawrence.
- FIG. 10.—*Bela incisula*, twice natural size. From Eastport, Maine.
- FIG. 11.—*Menestho albula*, eight times natural size. From Labrador.
- FIG. 12.—*Sipho lividus*, natural size. From a specimen taken off Metis, Canada, by Principal J. W. Dawson.
- FIG. 13.—*Buccinum Totteni*, natural size. Off Metis, Canada (J. W. Dawson).
- FIG. 14.—*Buccinum ciliatum*, twice natural size. Rivièro du Loup, Canada (J. W. Dawson).

