

Paper in:

Patrick N. Wyse Jackson & Mary E. Spencer Jones (eds) (2008) *Annals of Bryozoology 2: aspects of the history of research on bryozoans*. International Bryozoology Association, Dublin, pp. viii+442.

# The historical collections of Recent Bryozoa in the French National Collections

# Jean-Loup d'Hondt

Muséum National d'Histoire Naturelle, USM 0403 "Biodiversité des Communautés Aquatiques" Département "Milieux et peuplements aquatiques" (Biologie des Invertébrés Marins) 55, rue de Buffon, F - 75231 Paris Cedex 05, France

1. Introduction

2. Origins of the historical material

3. Major collectors and collections

# 1. Introduction

The national French collection of Recent Bryozoa was created by Henri de Lacaze-Duthiers (1821–1901) between 1865 and 1869, during the 4 years he served as Professor at the Muséum National d'Histoire Naturelle of Paris, and before his appointment as Professor in the Sorbonne, a position he occupied until his death at the age of 80. In 1867, M. A. Nyèvre, a former student (1865–1866) of Lacaze-Duthiers and an amateur naturalist, of whom little biographical information exists, arranged and catalogued the specimens of Bryozoa existing in the Museum.<sup>1</sup> This material makes up the first portion of the present collection; the majority of the specimens inscribed on Nyèvre's register are still extant. Originally it consisted of about 350 specimens reunited in 277 shares and included 210 type-specimens; at the end of the 19th century, the Julliens' collection and the material from the *Travailleur* and *Talisman* campaigns was joined to the original material. Then the general enrichment was very slow from 1900 to 1967 at the time of the author's arrival in the Museum in 1967 the collection comprised, 2500 specimens and 280 type specimens. Now, it numbers 25,000 lots, the greater part of them regrouping many specimens, and includes 1330 holotypes and paratypes of 770 species.

#### 2. Origins of the historical material

The historical collection corresponds on the one hand to the old material studied by the earlier bryozoologists (such as Lamarck, Lamouroux, Jullien and Smitt), and often included numerous holotypes or syntypes, and on the other hand to the non-type material collected by famous naturalists and travellers during the 19th century, or during the older

oceanographic cruises. All these specimens are considered as being precious and are not available for loan.

In addition to this historical material, enumerated further, the collection of the Recent Bryozoa in the Museum of Paris also includes other old specimens. For example:

- the Bryozoa of the Yenissei Swedish Expedition (1875–1876), integrated in 1878, and identified by Guérin-Ganivet in 1911.

- The Bryozoa of the Scientific Exploration of Algeria (1851), made on the initiative of the French government: 25 specimens, often without precise locality.

- The Eliza Jelly collection, comprises two gifts made by the British female naturalist: the first to Jules Jullien, the second (265 specimens) to the French zoologist Dollfus.

- Polar collections: specimens of Michaelsen (Hamburger Magalhanische Reise), and from the oceanographic cruise of the *Français*. The latter is composed of 200 specimens and about 40 types and is included in Calvet's collection, with some other types of the campaigns of the *Hirondelle*, the *Princesse Alice*, the *Roland*.

- Varia: collections from the Cape of Good Hope and from New Holland, collected by Captain Verreaux (1844); specimen of *Bugula fastigiata* from Northumberland given by the British naturalist J. Alder (in the Milne Edwards' collection).

- Phylactolaemates given by the Swiss medical man and naturalist Auguste-Henri Forel (1848–1931).

The collection does not include specimens from the Egyptian French Expedition, now probably entirely lost (Savigny's material, 1799–1802). Gervais' material (Phylactolaemates) registered by Nyèvre (1867) has not been found in the collection.

#### Remarks:

(A) Two different boats have held the same name, *l'Astrolabe*. The first was one of the vessels of the expedition directed by La Pérouse, lost with all hands, and of which we have any scientific material. The second *Astrolabe* was in fact formerly named *La Coquille*, rechristened by Dumont d'Urville. The specimens collected during the voyages of *L'Astrolabe* preserved in the national French collections have been only collected during the travels of Dumont d'Urville.

Jean-François de la Pérouse (1741–1788) was the commandant of the voyage of discovery of the ships *La Boussole* and *L'Astrolabe* (1785–1788), which tragically was wrecked on the reefs of Vanikoro, after the exploration of Cape Horn, Sandwich Islands, Japan, the Philippines, Australia, New Guinea and Easter Island.

(B) The collection does not contains specimens of Bryozoa from the famous expeditions of the boats *La Recherche* and *L'Espérance*, under the command of d'Entrecasteaux, and of *La Coquille*, commanded by Duperrey. Joseph-Antoine Bruni d'Entrecasteaux (1739–1793) was Rear-Admiral and Governor of Reunion Island; he left in search of La Pérouse during the years 1791–1793, visited China, Australia, New Caledonia, New Guinea and Philippines, and died during the expedition. Louis-Isidore Duperrey (1786–1865) participated in the French expedition of Freycinet in 1817–1820. He became Commandant of *La Coquille* for a scientific expedition (1822–1825) to the South Pacific.

#### 3. Major collectors and collections

# 3.1 Sebastien Vaillant (1689–1772)

Vaillant was professor in the French royal garden (later Muséum National d'Histoire Naturelle). His herbarium contains the eight oldest Recent specimens of Bryozoa now preserved in the historical collection of the institution. These were collected in Normandy between 1703 and 1707 (7 cheilostomes and 1 ctenostome; see d'Hondt<sup>2</sup>).

# 3.2 Jean-Baptiste Monet de Lamarck (1744–1829)

The founder of the theory of evolution, professor in the French National Museum of Natural History, Lamarck was the author of the first general classification of the Zoophytes, then including the Bryozoa. His collection, consisting of his own specimens and a large part of the material collected by Péron and Lesueur in the southern seas, numbers 130 bryozoans belonging to 77 species described in 1816 and at least 24 reliable type specimens, 13 other being probable.<sup>3</sup>

#### 3.3 Nicolas Baudin (1750–1803)

After a fruitful scientific expedition to the Antilles, this cost captain conducted, under the recommendation of the Parisian Museum, the French scientific expedition of the vessels *Le Géographe* and *Le Naturaliste* (1800–1803) to the southern hemisphere. The voyage, which was authorised by Napoleon Bonaparte, explored in particular the New Holland coasts. The zoologists of the expedition were Péron and Lesueur (see below). Three specimens of Bryozoa which are corresponding to type-specimens are present in the collection, are mentioned as being given by Baudin: *Caberea texta* Lamarck, 1816 (LBIMM-BRY-562, probably a type-specimen), and the syntypes of *Eschara incrustans* Lamarck, 1816 (LBIMM-BRY-570 and 5317).

# 3.4 Georges-Louis, comte de Bournon (1751–1825)

Throughout his life, Georges-Louis, who served in the military for a time, was a fervent collector of natural history objects. Taking refuge in London during Napoleon Bonaparte's government, he was one of the founders of the British Zoological Society and also the Geological Society of London in 1807. During the French Restoration, he managed the private natural history collection of King Louis XVIII. The French national collection includes a colony given by Bournon (labelled *Eschara fascialis* Lamarck, without locality, LBIMM-BRY-5321). For some years, Bournon managed the collections of mineralogy in the Muséum National d'Histoire Naturelle, prior to the election of the new director of the laboratory.

# 3.5 François Péron (1775–1810)

After a military career, Péron was appointed as official naturalist on board the *Géographe* under the command of Baudin. He assembled for the Muséum National d'Histoire Naturelle a very important collections of insects, molluscs, birds and various animals from the southern hemisphere (Timor, Australia, New Guinea). Most of them were illustrated by Lesueur, who progressively became his collaborator.<sup>4</sup>

# 3.6 Antoine Risso (1777–1845)

A chemist in Nice, and a naturalist by hobby, he described nine new species of Bryozoa in two papers published in 1827 and 1841.<sup>5</sup> Most of them are now in the French national collections. According to Tillier,<sup>6</sup> all the new Risso's species have been regarded as junior synonyms of previously described species. The whole collection numbers 38 specimens, including a probable syntype of Lamouroux (*Adeona grisea* Lamouroux, 1816: LBIMM-BRY-5099) and certainly a holotype of Edwards (*Pustulipora proboscidea* Edwards, 1838: LBIMM-BRY-5110), and the holotypes of some invalided Risso's species: *Patinula monachalis* Risso, 1841 (LBIMM-BRY-5098), *Retepora solanderia* Risso, 1827 (LBIMM-BRY-5106), *Eschara cyathus* Risso, 1827 (LBIMM-BRY-5111), *Retepora ellisia* Risso, 1827 (LBIMM-BRY-5123), *Retepora arborea* Risso, 1827 (LBIMM-BRY-5103), *Dactylopora irregularis* Risso, 1827 (LBIMM-BRY-5116) and *Dactylopora cervicornis* Risso, 1827 (LBIMM-BRY-5136).

#### 3.7 Henry-Marie Ducrotay de Blainville (1778–1850)

Belonging to one of the older families of the French nobility, this former student of Lamarck, Cuvier and Duméril, was an excellent specialist of the Zoophyta and of the Mollusca. He became professor in the Faculty of Sciences of Paris, in the College de France, in the Veterinary School, and finished his career as Professor in the Muséum National d'Histoire Naturelle of Paris, where he succeeded Lamarck. Here he was the personal adversary of Georges Cuvier. Ten specimens from Blainville exist in the present collection, including three types-specimens: *Retepora spinigera* (LBIMM-BRY-4450), *Retepora alveolata* (LBIMM-BRY-4451) and *Eschara incrassata* (LBIMM-BRY-4465).

# 3.8 Charles-Alexandre Lesueur (1778–1846)

A naval officer (of subaltern rank) and artist, Lesueur was unexpectedly appointed artist to the scientific expedition of the *Geographe* and of the *Naturaliste* to the southern regions (1802–1804) under the command of Nicolas Baudin. While on this expedition he worked alongside François Péron. Lesueur was the author of 14 engraved plates of

Zoophytes, which mainly included Bryozoa species. With Péron, he brought from these expeditions 73 Recent and 1 fossil bryozoan specimens, 22 of which became type-specimens of new species essentially described by Lamarck, and later included in the collection of this author.<sup>7</sup> We are indebted to Lesueur for the basis of the classification of the medusae. Later he emigrated to the United States where he settled, together with other naturalists, in New Harmony in Illinois.

# 3.9 Jean-Vincent-Félix Lamouroux (1779–1825)

A medical man, botanist, algologist, professor in the Faculty of Sciences at Caen, Lamouroux was also a specialist of the Zoophyta, for which he propounded a better classification than the one of his teacher Lamarck. He started the Museum of Natural History of Caen, destroyed during the Second World War. Lamouroux left 331 plates of herbarium, corresponding to 160 species of Bryozoa, and including the type-specimens of 50 species he described in 1816 and 1824.<sup>8</sup>

# 3.10 Louis-Claude Desaulses, baron de Freycinet (1779–1842)

Firstly a member of the general staff in the cruise of Nicolas Baudin, Desaulses became commandant of the *Uranie* scientific expedition to Rio de Janeiro and New Holland from 1817 to 1820. The Lamouroux collection<sup>9</sup> contains 8 specimens collected by Freycinet (LBIMM-BRY-19659, 19668, 19673, 19682, 19707, 19708: holotype of *Flustra macrostoma* (Lamouroux, 1824), *junior synonym* of *Cryptosula pallasiana* (Moll), 19709, and 19726: holotype of *Celleporella undulata* (Lamouroux, 1824)).

# 3.11 John Vaughan Thompson (1779–1847)

A military surgeon, Thompson was posted in Ireland, then New South Wales, the West Indies, Madagascar and Mauritius. He coined the term 'Polyzoa'. He gave a specimen of a bryozoan to Henri Milne Edwards (see below).

# 3.12 Jules-Hardouin Michelin (1786–1867)

Michelin was appointed by the high French administration in a career spanning 48 years. At the end of his professional career, in 1856, passionate about natural history and particularly by palaeontology, he assembled a very rich collection. His bryozoological material comprised only fossils, contained types of some Blainville species: *Retepora spinifera* (LBIMM-BRY-4450), *R. alveolata* (LBIMM-BRY-4451), *R. echinulata* (LBIMM-BRY-7913), *Eschara incurvata* (LBIMM-BRY-4465). For historical reasons, his fossil specimens, acquired by the Museum of Paris at the Michelin's death, have been included in the collection of the Recent Bryozoa. He is commemorated in the fossil coral genus name *Michelinia*.

# 3.13 Jean-René-Constant Quoy (1790–1869)

Quoy was appointed as surgeon major for the oceanographic voyage of the ship *L'Uranie* (1825) together with Freycinet, and as zoologist on the second *Astrolabe* (new name of *La Coquille* on the request of Dumont d'Urville during the years 1826–1829). His material (25 colonies) includes 3 type specimens: *Dedalea mauritiana* Quoy and Gaimard (LBIMM-BRY-555 and 556: Mauritius, 1829) and *Eschara sulcata* Quoy and Gaimard (LBIMM-BRY-4467: *Uranie*).

#### 3.14 Jules-Sébastien-César Dumont d'Urville (1790–1842)

A French admiral, formerly second-in-command of Duperrey during the scientific expedition of *La Coquille* (1822–1825), the ship was renamed *L'Astrolabe* when under his own command. He was appointed to search, during the years 1826-1829, for traces of the shipwreck of the La Pérouse expedition; so he visited New Zealand, New Guinea, Fiji, Celebes, and a great part of Indonesia and the Loyalty Islands. With the second *Astrolabe* and *La Zélée* he explored Chile, Polynesia, the Solomon Islands, New Guinea, New Zealand, Australia, and discovered Terre Adélie (see Quoy) between 1837 and 1840. One specimen labelled as having been collected by Dumont d'Urville (in 1825, along the Chilean coasts, at Concepcion) exists in the Lamouroux collection (LBIMM-BRY-19777). It is mentioned here only for information, because due to its very poor state of preservation it is impossible to actually identify it as a bryozoan!

#### 3.15 Abel Aubert Dupetit-Thouars (1793–1864)

An admiral, belonging to a family of old French nobility, whose many members who were marine officers, engaged in the study of natural science as a hobby. Dupetit-Thouars was commandant of the cruise of the *Venus* and established the French protectorate on Tahiti. Five specimens of Bryozoa were collected in 1839 near Malouines (= the Falkland Islands) during this cruise, and labelled as follows: *Microporella hyadesi* (Jullien, 1888) (det. J.-L. d'Hondt, 2003) as *Eschara* sp. (LBIMM-BRY-4462, many fragments, and LBIMM-BRY-4463; the later bearing a zoarium of *Callopora* sp.), *Retepora indica* d'Orbigny (LBIMM-BRY-5334, New Zealand, 1852, type), LBIMM-BRY-4687 (type-specimen of *Hornera americana* d'Orbigny, 1839, Malouines), *Sertella magellensis* (Busk, 1884) (LBIMM-BRY-4797, Malouines, 1839, det. J.-L. d'Hondt, 2003, 2 specimens). The specimens of *Microporella hyadesi* and *Sertella magellensis* have never been studied; also both of these species were described about 40 years later from other specimens.

## 3.16 Achille Valenciennes (1794–1865)

Formerly a student of Lamarck, Lacépède, Cuvier and Etienne Geoffroy Saint-Hilaire, he became a professor in the Museum of Paris (where he held the Chair of Annelids, Molluscs and Zoophytes) in succession to Blainville. Valenciennes made particular efforts to enrich the collections under his care. He gave a fossil specimen for the collection: LBIMM-BRY-4540, labelled *Cupuladria urceolata* d'Orbigny, from the Miocene of Touraine.

# 3.17 Joseph-Paul Gaimard (1796–1858)

Second-surgeon on board the Uranie (1817–1820), commanded by Freycinet, he became the collaborator of Quoy having been promoted to official zoologist of the expedition, and co-author of his works (see Quoy). Later, he was the first-surgeon and naturalist of the expeditions of the second Astrolabe (formerly La Coquille) of Dumont d'Urville in 1826–1829 to the south hemisphere and along South American coasts. Later, on the ship La Recherche (1834–1836) he visited Iceland, Greenland, the Faeroes, Spitsbergen and Laponia in 1838–1840. The collection contains samples of Alcyonidium australe d'Hondt and Moyano, 1979 (det. J.-L. d'Hondt, 2003) collected by Gaimard during his mission aboard the Dumont-Durville Astrolabe voyages (LBIMM-BRY-11625, about 10 specimens). No locality detail is given but it is very probably that they were collected in Argentina or Chile. They were donated by M. Hombron in 1841. Another specimen collected from Iceland during the voyage of La Recherche (LBIMM-BRY-517, labelled Lepralia annulata Busk, is included in the personal collection of Henri Milne Edwards. So, A. australe was named about 150 years after it had been collected during the Astrolabe expedition, but from other material – the authors of the species had not recognised Gaimard's specimens which have only recently been identified.

#### 3.18 Jean-Victor Audouin (1797–1851)

Co-founder with Henri Milne Edwards of the study of marine biology in France, professor in the Museum National d'Histoire Naturelle of Paris, Audouin was essentially a specialist of the Crustacea. On the request of Cuvier, he was commissioned to write the explanations of the hand-drawing plates of Savigny (who was unable to do so due to the onset of poor eyesight), made during the French expeditions in Egypt undertaken on the orders of Napoleon Bonaparte. The greater part of the specimens he collected with Edwards on the Normandy and Channel Island coasts between 1836 and 1838 and these are in Edwards' collection (however, Audouin is not identified as the co-collector). Only one specimen is specified as havin g been collected by both Audouin and Edwards: *Crisia denticulata* (LBIMM-BRY-5866: Chausey).

#### 3.19 Gérard-Paul Deshayes (1797–1875)

A medical man, and Cuvier's collaborator, Deshayes was a traveller naturalist who became a specialist of the Tertiary and Recent molluscs. He was essentially a palaeontologist, and became professor in the Museum National d'Histoire Naturelle, in succession to Lacaze-Duthiers (promoted to the rank of professor at the Parisian Faculty of Sciences), and was one of the founders of the Société Géologique de France. He lodged about 70 specimens in the national collections, but often, and unfortunately, failed to provide identifications and adequate, or indeed any locality information.

#### **3.20 Henri Milne Edwards (1800–1885)**

Born in Belgium, son of a former planter established in Jamaica, he was professor of Zoology (Insects and Crustaceans) in the Muséum National d'Histoire Naturelle and professor in the Faculty of Sciences of Paris. From 1828, together with his friend Audouin (and co-author of a zoological paper<sup>10</sup>) he established the study of marine biology in France and the new scientific subdiscipline, zoophysiology. He gave to the collections of the Museum a suite of Recent and fossil Bryozoa derived from France (English Channel, Channel Islands, Mediterranean Sea), that contains 22 types, 16 being of fossil species (from Craig of Sudbourne, in Great Britain, and from Doué-la-Fontaine, Grignon, Bordeaux and Dax, in France), the others being types of Recent species (Membranipora craticula Alder, belonging now to the genus Callopora; Membranipora stellata Thompson, now a form of Electra pilosa; Idmonea transversa Milne-Edwards, probably a synonym of *Idmidronea serpens* according to Jelly<sup>11</sup> and Guérin-Ganivet, unpublished, and now considered to be a junior synonym of *Tubulipora liliacea*, Saliconaria stokesi Milne-Edwards, a senior synonym of *Thalamoporella novaehollandae*). Some specimens were been identified by Thompson between 1833 and 1839. In his collection there also exists a specimen of Bugula fastigiata from Northumberland, England, given to him by the English naturalist Alder.

# 3.21 Victor Jacquemont (1801–1832)

This famous traveller and naturalist collected various natural history objects in the United States, Canada and India (where he died). A specimen of a bryozoan found by Jacquemont, given in 1865, exists in the collections of the Museum of Paris (LBIMM-BRY-1840). It is a fragment of an arborescent and ramified multifisciculate abraded zoarium, with cylindrical branches and autozooecial apertures only on the frontal side, and elongate and regularly parallel interzooecial walls on the dorsal side, relating probably to a Frondiporidae species.

# 3.22 Alcide Charles Vincent Dessalines d'Orbigny (1802–1857)

Zoologist and palaeontologist, naturalist-traveller, he was appointed by the Museum of Paris to conduct a pioneering faunistical study of South America. He authored reference books in palaeontology (on molluscs and bryozoans), and the Chair of Palaeontology was created for him in the Muséum National d'Histoire Naturelle. The collection includes four Recent specimens given by d'Orbigny, but no type-specimens (*Flustra papyracea*: LBIMM-BRY-4665 and 6647, *Nevianipora milneana*: LBIMM-BRY-14840 and 14841).<sup>12</sup>

#### 3.23 Gabriel Bibron (1806–1848)

A herpetologist and Dumeril's collaborator, he gave to the collection of the Museum two colonies of fossil Bryozoa from Sicily (labelled *Eschara nobilis* and *Alveolites suborbicularis*).

#### 3.24 Jean-Louis Armand de Quatrefages (1810–1892)

An embryologist, introduced to marine biology by Milne Edwards, professor of anthropology in the Museum of Paris, Quatrefages was the pioneer in the study of the deep-water fauna after the discovery, for the first time, of some epibiontic organisms on a submarine cable. He attempted to clarify animal evolution and his work was a precursor of the epigenetic theory. The collection contains four identified specimens given by Quatrefages (two French fossils and two Recent specimens from New Holland, without other information).

#### 3.25 Henri de Lacaze-Duthiers (1821–1901)

Formerly a student of Blainville, Quatrefages, Valenciennes and Henri Milne Edwards, Lacaze-Duthiers was professor in the Faculty of Sciences of Paris. Lacaze-Duthiers was also the founder of the marine biological stations of Roscoff and Banyuls-sur-Mer and pioneered the science of experimental zoology. His collection contains about 30 specimens of Bryozoa from Roscoff, the English Channel, Banyuls area, Algeria and Balearic Isles, but does not contain type specimens.

# 3.26 Paul Fischer (1832–1893)

This very active man was an Assistant in the Muséum National d'Histoire Naturelle, and he had a passion for marine biology and malacology. He offered the main part of his bryozoan specimens to his friend Jules Jullien; this material is registered in the Museum and is included in the Jullien's collection. Fischer also donated directly to the Museum a suite of about twenty identified specimens, including his types of some new boring Recent and fossil species including *Spathipora sertum* Fischer, 1866 (LBIMM-BRY-4674) and *Terebripora falunica* Fischer, 1867 (LBIMM-BRY-4673).

#### 3.27 Fredrick Adam Smitt (1839–1904)

In 1867, this Swedish naturalist offered to the Museum of Paris a collection of 45 specimens, most of which were identified in his paper of that year,<sup>13</sup> (some of them were identified later by Guérin-Ganivet,<sup>14</sup>) and these include various cotypes or paratypes: *Celleporella plicata*: Spitsbergen (LBIMM-BRY-522), *Lepralia sincera*: Spitsbergen (LBIMM-BRY-532), *Flustra membranaceotruncata*: Spitsbergen, (LBIMM-BRY-559), *Lepralia porifera majuscula*: Spitsbergen (LBIMM-BRY-4609), *Lepralia sincera*: Spitsbergen (LBIMM-BRY-4610), *Retepora elongata*: Waygatts (LBIMM-BRY-5810, *Flustra membranaceotruncata*: Ijsfjorden (LBIMM-BRY-5814).

# 3.28 Frédéric Joliet (1844–1878)

Lacaze-Duthiers' assistant in the zoological station of Roscoff, Joliet was a hero of the 1870 European war, but died early due to health problems contracted during the conflict. His collection<sup>15</sup> comprises about 210 bryozoan specimens, partially identified, from French coasts of Channel and from Mediterranean Sea (Menton, Algiers). The collection contains no type specimens.

#### 3.29 Jules Jullien (1842–1897)

A medical naval officer, he served temporarily as the personal doctor to the King of Cambodgia. Jullien was the main French systematician bryozoologist at the end of the 19th century, and collaborated of the Prince Albert I of Monaco. He began the study of the Bryozoa from the *Travailleur* and *Talisman* expeditions in the Bay of Biscay, on which he reported in 1883<sup>16</sup> (this work was later finished by Calvet in 1906<sup>17</sup>), and he also wrote on the first oceanographic cruises of the Prince of Monaco.<sup>18</sup> His own collection numbers 2600 specimens, ofwhich the *Travailleur* and *Talisman* material (1880–1883) represents 635 specimens and includes 153 types. The collection also contains Paul Fischer's material, the Antarctic *Romanche* collection and its 55 types; Captain Briand's collection from Singapore; Pouchet's collection from Lapland, and various specimens offered to him by numerous famous bryozoologists of the time including Allman, Bouvier, Chaper, Harmer, Jelly, Lacaze-Duthiers, MacGillivray, Verrill, Vigelius, and Waters.

# 3.30 Edmond Perrier (1844–1921)

A student of Lacaze-Duthiers, Perrier became a professor of zoology in the Museum (holding the Chair of Annelids, Molluscs and Zoophytes). He imposed Darwin's ideas in

France and he defined the theory of recapitulation. He died in the same room as Lamarck. The collection of the Museum includes 5 identified specimens of Recent species given by Perrier, all collected from the French coast at Saint-Vaast.

# Notes

- 1 J.-L. d'Hondt, 'Origine des collections de Bryozoaires actuels du Muséum National d'Histoire Naturelle de Paris', *Histoire et Nature*, 30 (1993), 55-61.
- 2 J.-L. d'Hondt, 'The French Pre-Lamarckian bryozoologists'. *In*: P.N. Wyse Jackson & M. E. Spencer Jones (eds.), *Annals of Bryozoology* (International Bryozoology Association, Dublin, 2002), 81-95.
- 3 J.-L. d'Hondt, 'Apports de Lamarck dans la connaissance des Bryozoaires). *In*: G. Laurent (ed.), *Jean-Baptiste Lamarck (1744-1829)* (Paris, Comité des Travaux Historiques et Scientifiques, 1997), 287-314.
- 4 J.-L. d'Hondt, 'Révision des Bryozoaires de Lesueur et Péron conservés dans les collections du Muséum National d'Histoire Naturelle de Paris', *Bulletin trimestriel de la Société géologique de Normandie et des Amis du Muséum du Havre*, 66 (3) (1979), 9-24.
- 5 A. Risso, Histoire naturelle des principales productions de l'Europe méridionale et principalement de celles des environs de Nice et des Alpes maritimes; tome cinquième (Paris, 1827), 402 p.; A. Risso, Atti della seconda riunione degli scienziati italiani, tenuta in Torino nel septembre del 1840 (Torino, 1841), 239-240.
- 6 S. Tillier, 'Les types de Bryozoaires de la collection Risso', Annales du Muséum d'histoire naturelle de Nice, 5 (1977), 153-154.
- 7 Hondt, note 4.
- 8 J.V.Lamouroux, *Histoire des Polypiers coralligènes flexibles*, *vulgairement nommés Zoophytes*. I-LXXXIV + 1-599 (Caen, F. Poisson, 1816); J.V. Lamouroux, 'Histoire Naturelle des Zoophytes ou Animaux Rayonnés' *In*: Lamouroux, Bory de Saint-Vincent et Eudes-Deslongchamps (eds.), *Encyclopédie Méthodique*, I-VIII + 1-819 (Paris, Vve Agasse, 1824). See also J.-L. d'Hondt, (1991). 'The Bryozoa of the Lamouroux collection', *In*: Bryozoaires actuels et fossiles : Bryozoa living and fossil, F. Bigey & J.-L. d'Hondt (eds.), *Bulletin des Sciences Naturelles de l'Ouest de la France*, H.S. 1 (1991), 161-168; and J.-L. d'Hondt, 'Discovery of Some Types of Cheilostomatous Bryozoa Described from 1812 to 1824 by J.-V.-F. Lamouroux', *In*: A. Herrera Cubilla & J.B.C. Jackson (eds), *Proceedings of the 11th International Bryozoology Association Conference* (Smithsonian Tropical Research Institute, Balboa, Panama, 2000): 211-218.
- 9 See Hondt, 2000, note 8.
- 10 J.V. Audouin and H.M. Edwards, 'Résumé des recherches sur les animaux sans vertèbres, faites aux îles Chausey', *Annales de Sciences Naturelles*, XV (1828),14.
- 11 E.C. Jelly, A Synonymic Catalogue of the Recent Marine Bryozoa including Fossil Synonyms (London, Dulau & Co., 1889), 322 p.
- 12 For further information on d'Orbigny and an assessment of his work on bryozoans see P.D. Taylor and D.P. Gordon, 'Alcide d'Orbigny's work on Recent and fossil bryozoans', *C.R*, *Palevol* 1 (2002), 533–547.
- 13 F.A. Smitt, 'Kritisk förteckning öfver Skandinaviens Hafs-Bryozoar', *Ofversigt af Kongliga Ventenskaps-Akademiens Förhandlingar* 23 (1867), 395-534 & 25 (1867), 3-230.

- 14 Guérin-Ganivet (unpublished).
- 15 L. Joliet, 'Contribution à l'Histoire des Bryozoaires des côtes de France', Archives de Zoologie expérimentale et générale ,VI (1) (1877), 193-304.
- 16 J. Jullien, 'Bryozoaires. Espèces draguées dans l'océan Atlantique en 1881', *Bulletin de la Société zoologique de France*, 7 (1883), 497-529.
- 17 L. Calvet, 'Bryozoaires'. In: Expeditions scientifiques du "Travailleur" et du "Talisman" pendant les années 1880-1883, 8. (Paris, Masson & Cie, 1906), 355-495.
- 18 J. Jullien and L. Calvet, 'Bryozoaires provenant des campagnes de l' "Hirondelle", *Résultats des campagnes scientifiques accomplies sur son yacht par le Prince Albert I, Monaco*, 23 (1903), 188 p.