

## **List of Dr. Albrecht von Roretz's collection of Japanese animals made about 120 years ago, compiled from the catalogues of Naturhistorisches Museum Wien**

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### **Abstract**

We compiled an inclusive list of Dr. Albrecht von Roretz's collection of Japanese animals made during his period of stay (1874–1882) and now deposited in the Naturhistorisches Museum Wien mainly on the basis of catalogue information. The list shows that the collection consists of more than 1,450 individuals, ranging from sponges to mammals, classified into about 360 species. Included in the collection are many name-bearing types of nemertean, polychaetes, echinurans, insects, myriapods, arachnids, branchiurans, holothurians, and ascidians.

### **Introduction**

Dr. Albrecht von Roretz (1846–1884), a medical doctor graduated from the University of Wien, came to Japan towards the end of 1874 as a "Consulats-Arzt" for the Austro-Hungarian embassy in East Asia, with an ardent hope to make a natural history survey of Japan (Tanaka, 1995; for his biographical studies see also Rabl and Ogata, 1984, Ogata, Rabl and Kurz, 1988, etc.). Early next year (in 1875), he made a 4-month trip to the western part of Japanese Islands, whose records were published in 3 parts (Roretz, 1875, 1876a, 1876b). These records often concern his interest in and collections of plants and animals.

Afterwards, he worked as a distinguished teacher and a practical doctor for medical schools and their associated hospitals in the cities of Nagoya, Kanazawa, and Yamagata till the summer of 1882 when he left Japan for Austria. For this period, he made a great contribution to the establishment of modern medical system in Japan. During his stay in Yamagata, he spent his summer vacations by taking trips to various places in Japan, including Hokkaido and Kyushu Islands (Rabl and Ogata, 1984). Thus, it may well be supposed that his collection contains a lot of specimens from various localities covering the whole 4 main Japanese islands (Hokkaido, Honshu, Shikoku, and Kyushu Islands, when mentioning from north to southwest).

When consulting the animal catalogues in the Naturhistorisches Museum Wien (NHMW), we came to know that its preceding "Wiener Hofmuseum" registered repeatedly from 1875 to 1886 the specimens collected by Roretz in Japan mainly by purchase through a famous specimen merchant J. Erber, and rarely sold by Roretz himself, or even gifted by Roretz's wife Olga (Mrs. Olga von Jemchoujnikoff) after his sudden death (Table 1). And our general survey of the catalogues revealed that Roretz's Japanese animal collection (simply as Roretz collection hereafter) consisted of more than 1,450 individuals (Table 1) ranging from sponges to mammals, classified into about 360 species. Herein we give a list of them on the basis of catalogue information in a hope for detailed taxonomic and historical studies in the future.

### Previous taxonomic studies on Roretz collection

As shown briefly in the list, only a part of the collection have so far been studied taxonomically for the following animals: nemerteans by Senz (1997, 1998), polychaetes by Marenzeller (1879, 1884), echiurans by Drasche (1881), insects (though not included in the list below) by Kohl (1884), arachnids and myriapods by Koch (1878) (for brief explanation of the former material see Ono, 2001a, b), branchiurans by Thiele (1900), holothurians by Marenzeller (1877 [1878], 1881 [1882]), and ascidians by Drasche (1884). As a result, the collection contains many name-bearing types for these animal groups.

**Table 1.** Composition of Dr. Albrecht von Roretz's collection of Japanese animals made from 1874 to 1882, based on the catalogues of the Naturhistorisches Museum Wien. Lots are numbered according to registration dates recorded in the catalogues. Total number of taxa here calculated may be somewhat overestimated, because a taxon may possibly be included in different lots.

Lot Number	Animal Group (Registration date etc.)	No. of Taxa allotted	No. of specimens
<i>“Evertebrata Varia”</i>			
[1]	1875 (Nr. 1115-1134; Sold by J. Erber at 75 Gulden)	20	28
[2]	1875 (Nr. 1135-1161; Sold by J. Erber at 75 Gulden)	24	61
[3]	1876 IX (Nr. 1430-1450; Sold by J. Erber at 95 Gulden)	21	52
[4]	1876 XIII (Nr. 1451-1477; Sold by J. Erber at unknown price)	27	52
[5]	1881 VII (Nr. 2376-2379, 81, 95-96; Sold by J. Erber at 30 Gulden)	7	13
[6]	1881 VIII (Nr. 2380, 82-94; Sold by J. Erber at unknown price)	14	>22
[7]	1886 II (Nr. 12300-12306; Gifted by Mrs. Olga von Roretz)	7	78
<i>“Crustaceans”</i>			
[8]	Nov. 1875 (Sold by J. Erber at 20 Gulden)	26	77
[9]	20 Feb. 1877 (Sold by J. Erber at 50 Gulden)	47	186
[10]	May 1881 (Sold by Dr. Roretz at 10 Gulden)	21	99
[11]	May 1886 (Gifted by Mrs. Olga von Roretz)	3	14
<i>“Myriopods”</i>			
[12]	Mar. 1881 (Sold by Dr. Roretz at 2 Gulden)	1	8
<i>“Arachnids”</i>			
[13]	Feb. 1879 (Gifted by J. Erber)	31	75
[14]	Mar. 1881 (Sold by Dr. Roretz at 8 Gulden)	5	87
<i>“Molluscs” (including ascidians and brachiopods)</i>			
[15]	Sept. 1875 (Sold by J. Erber at 135 Gulden)	59	170
[16]	Sept. 1876 (Sold by J. Erber at 25 Gulden)	16	28
[17]	Oct. 1876 (Sold by J. Erber at 40 Gulden)	54	153.5 (0.5 probably meaning a valve)
[18]	Jan. 1886 (Nr. 15375-15377; Gifted by Mrs. Olga von Roretz)	3	242
<i>“Fishes”</i>			
[19]	1881 (from Yokohama)	1	4
<i>“Amphibians”</i>			
[20]		2	2
<i>“Mammals”</i>			
[21]		3	3
<b>Total</b>		<b>392</b>	<b>&gt;1454.5</b>

### A list of Roretz collection

Listed below is the Roretz collection of Japanese animal compiled from the catalogues of the Naturhistorisches Museum Wien, sometimes accompanied with our brief notes. Each species name, its authorship (if present), and number of individuals were copied correctly from the hand-written catalogues, and therefore, may be sometimes misapplied, misspelled, or miscounted to be revised and up-dated in the future by specialists. Locality was often described simply as "Japan" in the catalogues, which is omitted here in such cases. Species names are arranged in alphabetical order in respective animal groups for users' convenience. Numerals in brackets indicate each the identification number of the lot to which the specimen(s) of respective species belonging (see Table 1).

The present list may lack a certain number of already described species, whose specimens were collected by Roretz in Japan and deposited in the Naturhistorisches Museum Wien, because the list was based on old, sometimes rather incomplete catalogues. Some examples are: the polychaetes, *Notophyllum japonicum* n. sp. and *Eulalia albopicta* n. sp. (see Marenzeller, 1879); and the hymenopterans, *Notogonia japonica* n. sp. (= *Liris festinans japonica*) (see Kohl, 1884) and *Vespa crabro* Linnaeus.

#### Phylum Porifera

1. *Hyalonema sieboldi* Gray: [1], 1 ind.
2. Porifera: [1], 1 ind.
3. Porifera auf *Fuscus inconstans*: [2], 2 inds.
4. Spongie: [3], 2 inds.
5. Spongie: [3], 1 ind.

#### Phylum Cnidaria

6. *Alcyonium*: [3], 3 inds.
7. *Calligorgia feabellum* Ehrb: [1], 1 ind.
8. *alyptophoon japonica* Gray: [1], 1 ind.
9. *Cavernularia elegans* Herke: [3], 1 ind.
10. *Cereus*: [3], 3 inds.
11. *Coenopsammia*: [1], 1 ind.
12. *Cyathelia axillaris* Ell. et Loe: [1], 1 ind.
13. *Desmophyllum dianthus* Esp.: [1], 1 ind.
14. *Equisetella gregorii* Gray: [1], 1 ind.
15. *Funcella*: [1], 1 ind.
16. *Keratoisis*: [1], 1 ind.
17. *Melitella japonica*: [1], 1 ind.
18. *Muricea*: [1], 1 ind.
19. *Plumarella hilgendorfi* Stm: [1], 1 ind.
20. *Pteroeides breviradiatum* Koll.: [3], 2 inds.
21. Primnoide No. 4: [1], 1 ind.
22. Primnoide No. 5: [1], 1 ind.

#### Phylum Platyhelminthes

23. *Bipalium*: [4], 1 ind.

24. Turbellaria: [2], 1 ind.

#### Phylum Nemertea

25. *Cerebratulus*: [6], 1 ind.
26. *Cerebratulus*: [6], 1 ind.
27. *Cerebratulus*: [6], 2 inds.
28. *Meckelia*: [4], 1 ind.
29. Nemertina: [2], 1 ind., Nagasaki.

(Notes: According to Senz (1998), the following specimens of Roretz collection were available; *Emplectonema gracile* (Johanston), 20 fragments, NHMW-EV 16705; *Tubulanus roretzi* Senz, the type-series, registered in 1886, 9 individuals, NHMW-EV 3565-3573, see Senz (1997, p. 424); and undetermined specimens from Nagasaki (see 29 above) and an unknown locality.)

#### Phylum Nematomorpha

30. *Gordius*: [4], 1 ind.

#### Phylum Mollusca

31. *Aeolis*: [16], 1 ind.
32. *Aglaia*: [16], 4 inds.
33. *Anatina japonica* Lischke: [15], 1 ind.
34. *Ancillaria albocallosa* Lischke: [15], 1 ind.
35. *Arca decurvata* Lischke (= *Arca obliquata* Reeve non Gray); [15], 1 ind.: [17], 4 inds.
36. *Arca kraussii* Phil.: [17], 1 ind.
37. *Arca obtusa* Reeve: [15], 1 ind.
38. *Arca subcrenata* Lischke: [17], 1 ind.

39. *Auricula(Ellobium)* sp.: [17], 2 inds., Nagasaki.
40. *Avicula fucota* Gould: [15], 1 ind.
41. *Bulimus* sp. (Alkohol) (No. 411), 1 guter, 3 pull.: [15], 1 ind., I. Sikok[=Shikoku].
42. *Caecella chinensis* Dsh: [15], 2 inds; in Alkohol, [15], 2 inds.
43. *Calcar haematragus* Menke: [17], 4 inds., Monguski, Ushibuka.
44. *Cardium muticum* Reeve: [15], 2 inds., Süd Japan.
45. *Cerithidea* sp.: [17], 4 inds.
46. *Chiton (Lepidopl)* sp. (Alkohol): [15], 1 ind., 6 Apr. Nagasaki.
47. *Chitonellus* sp. (Alkohol): [15], 3 inds., 6 Apr. Nagasaki.
48. *Clausilia japonica* Crone: [18], 35 inds.
49. *Clausilia martensi* Heklts: [15], 7 inds; in Alkohol, [15], 1 ind.
50. *Clausilia platydera* v. Mart.: [18], 200 inds.
51. *Clausilia* sp.: [15], 1 ind., 6-9 May, 1875, S. Japan.
52. *Clausilia* sp.: [15], 1 ind., 23 May, 1875, S. Japan.
53. *Clausilia* sp.: [15], 3 inds., Süd Japan.
54. *Clausilia* sp.: [15], 4 inds., S. Japan.
55. *Clausilia* sp.: [15], 4 inds., 23 May, 1875, S. Japan; 55-57 are different materials.
56. *Clausilia* sp.: [15], 4 inds., 23 May, 1875, S. Japan.
57. *Clausilia* sp.: [15], 4 inds., 23 May, 1875, S. Japan.
58. *Clausilia* sp.: [15], 5 inds., 6-9 May, 1875, S. Japan.
59. *Clausilia* sp.: [15], 7 inds., S. Japan.
60. *Clausilia* sp.: [15], 8 inds., 6-9 May, 1875, S. Japan.
61. *Cyclophorus herklotsi* Martens: [15], 3 inds., S. Japan; in Alkohol, [15], 1 ind.
62. *Cyclotus campanulatus* Martens: [15], 5 inds., S. Japan; in Alkohol, [15], 1 ind., S. Japan.
63. *Cypricardia lirata* Reeve: [17], 4 inds., Nagasaki.
64. *Cytherea meretrix* L. var. *lusoria*: [17], 2 inds.
65. *Donax* sp. (pullur): [15], 5 inds.; 65 and 66 are different materials.
66. *Donax* sp. (pullur): [15], 5 inds.
67. *Doris* sp. (Alkohol): [15], 2 inds., 18 Apr. Nagasaki.
68. *Doris*: [16], 1 ind.; 68 and 69 are different materials.
69. *Doris*: [16], 1 ind.
70. *Doris*: [16], 3 inds.
71. *Dosinia iaponica* Reeve: [17], 2 inds.
72. *Euplocamus*: [16], 3 inds.
73. *Euthria (Fusus) viridula* Dunker: [17], 4 inds.
74. *Fasciolaria audouini* Jonas: [17], 1 ind.
75. *Fuscus inconstans* Lischke: [15], 3 inds.
76. *Fuscus nodosoplicatus* Dunkr. (Thier in Alkohol.): [15], 1 ind.
77. *Goniodoris* sp. (Alkohol) No. 401: [15], 1 ind.
78. *Haliotis gruneri* Phil.: [17], 1 ind.
79. *Helicina* sp.: [15], 2 inds., Süd Japan
80. *Helix conospira* Martens: [15], 1 ind.
81. *Helix myomphala* Martens: [15], 2 inds., Nagasaki.
82. *Helix peliomphala* Pfr.: [15], 6 inds., S. Japan; in Alkohol, [15], 1 ind.
83. *Helix peliomphala* Pfr. var. *luchuana* Sow.: [15], 2 inds., S. Japan; [17], 2 inds., Nagasaki.
84. *Helix peliomphala* Pfr. var.: [17], 2 inds., Nagasaki.
85. *Helix peliomphala* Pfr. var.: [17], 6 inds., Nagasaki.
86. *Helix peliomphala* Pfr. var.: [17], 1 ind., Nagasaki; 86-88 are different materials.
87. *Helix peliomphala* Pfr. var.: [17], 1 ind., Nagasaki.
88. *Helix peliomphala* Pfr. var.: [17], 1 ind., Nagasaki.
89. *Helix sinnilaris* Fer. v. *stimpsoni*: [17], 1 ind.
90. *Helix* sp. (*ciliosa* Pfr.) in Alkohol: [17], 9 inds.
91. *Helix* sp.: [15], 3 inds., Süd Japan
92. *Lampania multiformis* Lische: [17], 8 inds.
93. *Limnea* sp.: [15], 4 inds., S. Japan.

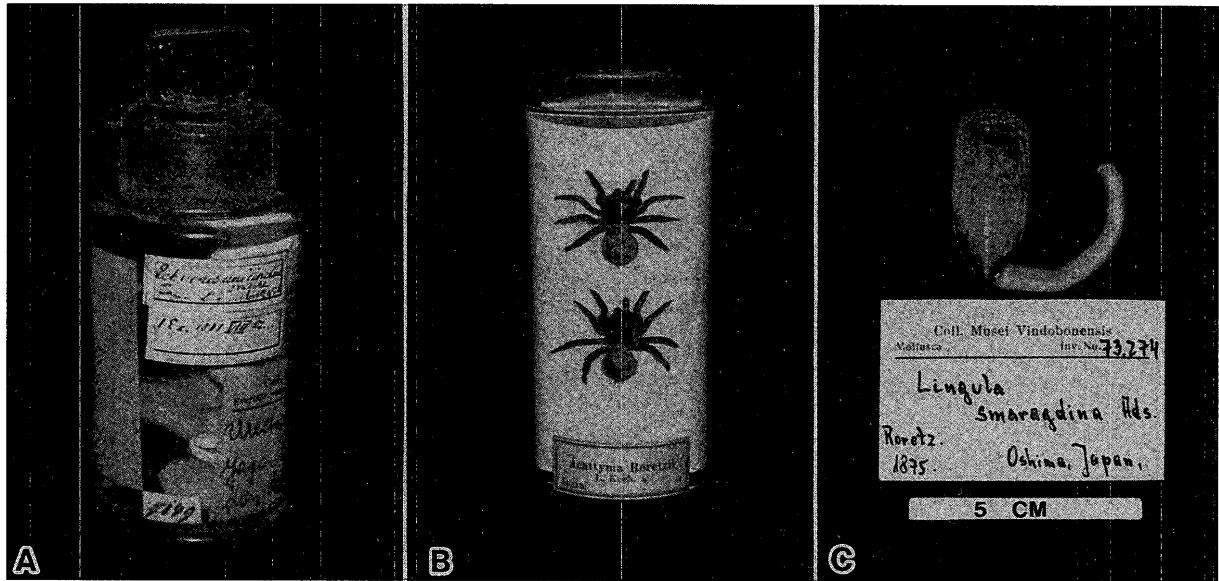
94. *Lithophagus nasutus* Phil.: [17], 4 inds.
95. *Mactra sulcalaria* Dsh.: [15], 2 inds.; [17], 2 inds.
96. *Mactra (Trigonella) veneriformis* Desh.: [17], 1/2 ind.[=a half valve]
97. *Melania* sp. (Alkohol): [15], 3 inds.
98. *Meroë (Sunetta) excavata* Hanl.: [17], 7 inds.
99. *Modiola modiolus* L.: [17], 1 ind.
100. *Murex (Vitularia) monachus* Crosse: [17], 1 ind.
101. *Mytilus giganteus* Holmberg: [17], 1 ind.
102. *Mytilus hirstus* Lam.: [17], 2 inds.
103. *Nassa festiva* Ponis (*Nassa lirata* Danker): [17], 4 inds.
104. *Nassa gracilis* Pease: [17], 3 inds.
105. *Natica adamsiana* Dunkr.: [15], 1 ind.
106. *Natica pellistigrina* Chemn.: [17], 2 inds.
107. *Natica pyriformis* Rclz. (mit Horndeckel): [15], 2 inds., Kirishima.
108. *Nerita albicilla* L.: [17], 5 inds.
109. *Nerita pica* Gould: [17], 4 inds., Nagasaki.
110. *Paludina iaponica* Mart.: [17], 2 inds.
111. *Paludina* sp. (Alkohol): [15], 1 ind., S. Japan.
112. *Paludina* sp.: [15], 2 inds., S. Japan.
113. *Patella lans* Reeve: [15], 1 ind.
114. *Pecten laetus* Gould: [17], 2 inds.
115. *Pectunculus albolineatus* Lischke: [17], 4 inds.
116. *Perna vulsella* Lam. (= *Isognommon perna* L.): [17], 2 inds.
117. *Philine*: [16], 7 inds.
118. *Philine*: [18], 3 inds.
119. *Philomycus (?bilineatus* Bens) (Alkohol): [15], 1 ind.
120. *Philomycus* sp. (Alkohol) Nippon 336: [15], 1 ind.
121. *Pleurobranchaea*: [16], 2 inds.
122. *Pleurophyllida*: [16], 1 ind.
123. *Pleurotoma unedo* Valenc.: [15], 2 inds.
124. *Plocamophorus*: [16], 1 ind.
125. *Potamides fluviatilis* Pos. & Mick.: [17], 5 inds.
126. *Psamobia* sp.: [15], 1 ind.
127. *Pterocyclus* sp. No. 410 (in Alkohol): [15], 5 inds.
128. *Pterocyclus* sp.: [15], 2 inds., 1 May 1875, Kirishima.
129. *Pupinella* sp. (Alkohol): [15], 5 inds., 1 May 1875, Kirishima.
130. *Pupinella* sp.: [15], 10 inds., 1 May 1875, Kirishima.
131. *Ranella bufonia* Gmel.: [17], 1 ind.
132. *Rapana bezoar*: [15], 1 ind.
133. *Septifer virgatus* Wieg.: [17], 2 inds.
134. *Solen gracilis* Gould: [17], 4 inds.
135. *Soletellina olivacea* Lay: [15], 2 inds.
136. *Strombus succinctus* L.: [17], 1 ind.
137. *Suctus corrugatus* Reeve (Alkohol): [15], 2 inds.
138. *Tapes amabilis* Phil.: [17], 1 ind.
139. *Tapes euglyptus* Phil.: [17], 2 inds.
140. *Tapes ?marmoratus* Lk: [15], 3 inds., Bobe.
141. *Tapes philippinarum* Reeve: [17], 3 inds., Nagasaki.
142. *Tapes sulcosa* Phil.: [17], 11 inds.
143. *Tapes* sp.: [15], 1 ind.
144. *Tectura (Acmaea) schrenkii* Lischke: [17], 3 inds.
145. *Tritonia*: [16], 1 ind.
146. *Trochus argyrostoma* Gmel.: [17], 1 ind.
147. *Trochus carpenteri* Dunk.: [17], 2 inds.
148. *Trochus granulatus* Gmel (Alkohol): [15], 2 inds.
149. *Trochus nigerrimus* Gmel.: [17], 2 inds.
150. *Trochus rusticus* Gmel.: [17], 1 ind.
151. *Trochus (Infundibulum) rota* Dunker: [17], 1 ind.
152. *Turbo cornutus* Gmel. Japanesische Var.: [15], 1 ind.
153. *Turritella*: [15], 1 ind.
154. *Venus melanaegis* Roem.: [17], 6 inds.

## Phylum Annelida

### <Polychaetes>

155. *Alitta oxypoda* Marenz: [1], 1 ind.; [4], 1 ind.; the syntypes of *Nereis (Alitta) oxypoda*, "wahrscheinlich [=probably] bei Yokohama", see Marenzeller (1879, pp. 120-122).

156. *Amphitrite*: [4], 1 ind.; probably one of the syntypes of *Amphitrite ramosissima* Marenzeller, see Marenzeller (1884, pp. 200-201).
157. *Aphrodite japonica* Marenz: [4], 3 inds.; the syntypes, see Marenzeller (1879, pp. 111-112).
158. *Aphrodite*: [6], 2 inds.
159. *Chaetopterus cautus* Marenz: [4], 4 inds.; the syntypes, "wahrscheinlich bei Yokohama", see Marenzeller (1879, pp. 143-146).
160. *Chloeia*: [6], 6 inds.
161. *Cirratulus comosus* Marenz: [4], 4 inds.; the syntypes, see Marenzeller (1879, pp. 147-148); [6], 3 inds.
162. *Eunice micropriion* Marenz: [4], 1 ind.; the holotype, see Marenzeller (1879, pp. 135-136).
163. *Euphrosyne superba* Marenz: [4], 1 ind.; the holotype, see Marenzeller (1879, pp. 110-111).
164. *Glycera decipens* Marenz: [4], 1 ind.; one of the syntypes, see Marenzeller (1879, pp. 140-142); [7], 8 inds.
165. *Glycera opisthobranciata* Marenz: [4], 2 inds.; the syntypes, see Marenzeller (1879, pp. 139-140).
166. *Lepidonotus gymnonotus* Marenz: [4], 2 inds.; the syntypes of *Polynoe (Lepidonotus) gymnonotus*, see Marenzeller (1879, pp. 112-113).
167. *Loimia*: [4], 1 ind.; probably one of the two specimens of *Loimia montagui* Grube, described by Marenzeller (1884, pp. 205-207).
168. *Lumbriconereis*: [6], number of individuals unrecorded.
169. *Nereis dumerilii* Aud et M. Edw.: [6], 1 ind.
170. *Nereis mictodonta* Marenz: [1], 5 inds.; [4], 1 ind.; the syntypes, see Marenzeller (1879, pp. 118-119); [7], 20 inds.
171. *Nereis pelagica* L.: [4], 1 ind.; "wahrscheinlich bei Yokohama" (see Marenzeller, 1879, p. 122).
172. *Owenia*: [6], number of individuals unrecorded.
173. *Pectinaria aegyptia* Sav.: [4], 1 ind.; described by Marenzeller (1879, pp. 150-151).
174. *Peronella decagenales*: [5], 1 ind.
175. *Polynoe lamellifera* Marenz: [6], 1 ind.
176. *Pomatocerus*: [4], 1 ind.; probably the holotype of *Pomatocerus helicoides* Marenzeller, see Marenzeller (1884, p. 217-218).
177. *Sabella*: [2], 1 ind.; probably the holotype of *Sabella aulaconota* Marenzeller, "gefunden bei Nagasaki", see Marenzeller (1884, p. 210).
178. *Sabella*: [2], 1 ind.; probably the holotype of *Laonome japonica* Marenzeller, "gefunden bei Nagasaki", see Marenzeller (1884, p. 212-213).
179. *Sabella*: [4], 5 inds.; probably the syntypes of *Potamilla myriops* Marenzeller, see Marenzeller (1884, p. 211).
180. *Syllis inflata* Marenz: [6], 1 ind.
- <Oligochaetes>**
181. *Perichaeta sieboldi* Horst: [2], 3 inds.
182. *Perichaeta ijimae* Rosa: [4], 1 ind.
- <Hirudineans>**
183. *Hirudo*: [2], 4 inds.
184. *Hirudo*: [4], 1 ind.
185. *Hirudo*: [6], 2 inds.
- Phylum Echiura**
186. *Echiurus uncinatus* Drasche: [4], 2 inds., the syntypes (see Drasche, 1881), now called *Urechis uncinatus* (Drasche); [6], 1 ind; all these individuals are registered inclusively as "Coll. Musei Vindobonensis Evertebr. varia Inv. No. 5448" (Fig. 1A), one of which proved *Ochetostoma* sp.
- Phylum Sipuncula**
187. *Phascolosoma*: [2], 1 ind., Nagasaki.
188. *Phascolosoma*: [4], 2 inds.
189. *Sipunculus*: [2], 2 inds.
190. *Sipunculus*: [4], 1 ind.
191. *Thalassema*: [6], 1 ind.
- (Notes: In Roretz collection only a single bottle of two individuals is now available, registered as "Coll. Musei Vindobonensis Evertebr. varia Inv. No. 5326 with the label of "*Sipunculus cumanensis* Kef. Nagasaki, don. Roretz 1875". They proved *Siphonosoma cumanense*.)



**Fig. 1.** Three specimens in the Roretz collection from Japan, deposited in the Naturhistorisches Museum Wien. **A:** The echiuran, *Echiurus uncinatus* Drasche, the syntypes. **B:** The spider, *Acattyma roretzii* Koch, probably syntypes. **C:** The brachipod, *Lingula smaragdina* Adams from Oshima, now in the city of Kumamoto, on the coast of Ariake Sea, Kyushu Island, listed in the old catalogue as "*Lingula anatina* Lamarck".

### Phylum Arthropoda

#### <Arachnids>

192. *Acattyma roretzii* L. Kch: [13], 10 inds., probably the syntypes, see Koch (1878, pp. 761-763) (Fig. 1B).
193. *Agalena opulenta* L. Kch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 757-759).
194. *Argiope amoena* L. Koch: [13], 2 inds., probably the syntypes, see Koch (1878, pp. 735-737); [14], 5 inds.
195. *Argiope bruennichii* (Scop.): [14], 8 inds.
196. *Caelotes insidiosus* L. Kch: [13], 3 inds., probably the syntypes, see Koch (1878, pp. 751-752).
197. *Caelotes luctuosus* L. Kch: [13], 3 inds., probably the syntypes, see Koch (1878, pp. 752-755).
198. *Caelotes exitialis* L. Kch: [13], 2 inds., probably the syntypes, see Koch (1878, pp. 755-757).
199. *Clubiona japonica* L. Kch: [13], 5 inds., probably the syntypes, see Koch (1878, pp. 759-760).
200. *Diaea nitida* L. Kch: [13], 1 ind.
201. *Dolomedes sulfureus* L. Kch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 778-779).
202. *Epeira seminigra* L. Koch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 737-738).
203. *Epeira ventricosa* L. Koch: [13], 2 inds., probably the syntypes, see Koch (1878, pp. 739-740).
204. *Ero foliata* L. Kch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 748-749).
205. *Hasarius albarius* L. Kch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 780-782).
206. *Hasarius fulvus* L. Kch: [13], 6 inds., probably the syntypes, see Koch (1878, pp. 782-784).
207. *Linyphia exornata* L. Kch: [13], 2 inds., probably the syntypes, see Koch (1878, pp. 746-748).
208. *Lycosa atropos* L. Kch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 770-772).
209. *Lycosa coelestis* L. Kch: [13], 2 inds., probably the syntypes, see Koch (1878, pp. 772-775).

210. *Meta blanda* L. Kch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 743-744).
211. *Nephila clavata* L. Kch: [13], 2 inds., probably the syntypes, see Koch (1878, pp. 741-743); [14], many inds.
212. *Opilio decoratus* L. Kch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 784-785).
213. *Oxyopes sertatus* L. Kch: [13], 5 inds., probably the syntypes, see Koch (1878, pp. 779-780).
214. *Oxytate striatipes* L. Kch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 764-766).
215. *Pardosa astrigera* L. Kch: [13], 2 inds., probably the syntypes, see Koch (1878, pp. 775-778).
216. *Philodromus auricomus* L. Kch: [13], 2 inds., probably the syntypes, see Koch (1878, pp. 763-764).
217. *Psathyropus tenuipes* L. Kch: [13], 6 inds., probably the syntypes, see Koch (1878, pp. 785-786).
218. *Sarotes aulicus* L. Kch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 766-767).
219. *Sarotes invictus* L. Kch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 767-769).
220. *Tegenaria derhamii* Scop.: [13], 1 ind., see Koch (1878, p. 757).
221. *Tetragnatha praedonia* L. Kch: [13], 1 ind., probably the holotype or a syntype, see Koch (1878, pp. 744-746).
222. *Uroctea compactilis* L. Kch: [13], 5 inds., probably the syntypes, see Koch (1878, pp. 749-751).
223. [Unnamed]: [13], 2 inds., Yokohama.
224. [Unnamed]; [14], 1 ind.
225. [Unnamed]; [14], 1 ind.
- <Crustaceans>
226. *Alpheus malebaricus* Fabr.: [8], 1 ind.; [9], 13 inds.
227. *Alpheus*; [10], 3 inds.
228. *Amphitrite hastatoides* Fabr.: [9], 2 inds.
229. *Arcania spinosa* Haan: [10], 9 inds.
230. *Arcania cf. spinosa* W. d. H.: [9], 1 ind.
231. *Argulus scutiformis* Thiele, TYPE: [9], 1 ind., probably the holotype, see Thiele (1900, p. 48).
232. *Callianassa*: [10], 6 inds.
233. *Caprella kroyeri* W. d. H.: [8], 5 inds.
234. *Charibdis bidentata* Herbst: [10], 1 ind.
235. *Charybdis variegata* Fabr.: [9], 3 inds.
236. *Crangon*: [8], 3 inds.
237. *Dorippe granulata* W. d. H.: [9], 1 ind.
238. *Doujyce japonica* v. Sieb.: [10], 2 inds.
239. *Dromia rumphii* Fabr. (pull.): [9], 1 ind.
240. *Elmene ungriformis* Haan: [10], 1 ind.
241. *Eriocheir japonicus* W. d. H.: [9], 2 inds.
242. *Eriocheir penicillatus* W. d. H.: [9], 7 inds.
243. *Eupagurus* sp.: [9], 3 inds.
244. *Galathea* sp.: [9], 1 ind.
245. *Gebia maior* W. d. H.: [8], 4 inds.; [9], 5 inds.
246. *Gelasimus arcuatus* W. d. H.: [8], 5 inds.
247. *Grapsus (Pachysoma) haematocheir* W. d. H.: [8], 1 ind.
248. *Grapsus (Pachysoma) pictus* Haan: [10], 4 inds.
249. *Halimede fragifera* W. d. H.: [9], 1 ind.
250. *Helice tridens* W. d. H.: [8], 1 ind.
251. *Hippolyte*: [8], 4 inds.
252. *Hippolyte*: [9], 6 inds.
253. *Hippolyte*: [11], 1 ind.
254. *Ibacus ciliatus* v. Siebold: [9], 1 ind.
255. *Inachus (Achaeus) japonicus* W. d. H.: [9], 2 inds.
256. *Lambrus laciniatus* Haan: [10], 1 ind.
257. *Latreillia valida* W. d. H.: [9], 1 ind.
258. *Leucosia longifrons* Haan: [8], 2 inds.; [10], 1 ind.
259. *Leucosia rhomboidalis* Haan: [10], 1 ind.
260. *Ligia*: [8], 5 inds.; [9], 6 inds.
261. *Livoneca* sp.: [9], 1 ind.
262. *Livoneca*: [9], 5 inds.
263. *Livoneca*: [10], 30 inds.
264. *Macrophthalmus dilatatus* W. d. H.: [9], 5 inds.
265. *Macrophthalmus japonicus* W. d. H.: [8], 2 inds.
266. *Maia spinigera* W. d. H.: [9], 1 ind.



267. *Matuta victor* Fabr.: [9], 2 inds.; [10], 5 inds.
268. *Menaethius quadridens* W. d. H.: [9], 5 inds.
269. *Micippe thalia* Herbst: [8], 1 ind.; [9], 1 ind.; [10], 1 ind.
270. *Mursia armata* Haan: [10], 2 inds.
271. ?*Mursia* sp.: [9], 2 inds.
272. *Nebalia* sp.: [9], ireit. 15 inds.
273. *Orchestia* sp.: [9], 4 inds.
274. *Pagurus impressus* W. d. H.: [8], 1 ind.
275. *Pagurus striatus* Latr.: [8], 1 ind.
276. *Pagurus* sp.: [8], 1 ind.
277. *Pagurus* sp.: [9], 2 inds.
278. *Palaemon paucidens* W. d. H.: [9], 6 inds.
279. ?*Palaemon latirostris* Haan: [10], 4 inds.
280. *Palaemon*: [11], 1 ind.
281. *Palinurus trigonus* v. Siebold: [9], 2 inds.
282. *Parthenope (Lambrus) valida* W. d. H.: [9], 2 inds.
283. *Penaeus affinis* Edw.: [8], 1 ind.
284. *Penaeus monoceros* Fabr.: [8], 2 inds.; [9], 2 inds.
285. ?*Peneus monoceros* Fabr.: [10], 1 ind.
286. *Penaeus*: [9], 1 ind.
287. *Philyra pisums* W. d. H.: [9], 7 inds.
288. *Pilumurius miniatus* Haan: [10], 1 ind.
289. *Pinnaxodes major* Ortm.: [9], 2 inds.
290. *Pinnotheres pisoides* Ortm.: [8], 8 inds.; [9], 7 inds.
291. *Pinnotheres*: [8], 6 inds.
292. *Platynotus depressus* W. d. H.: [8], 1 ind.
293. *Pollicipes mitella* L.: [8], 6 inds.; [9], 4 inds.
294. *Porcellana japonica* W. d. H.: [9], 6 inds.
295. *Porcellana*: [8], 3 inds.
296. *Porcellana*: [10], 10 inds.
297. *Portunus bidentatus* Herbsf.: [9], 2 inds.
298. *Scillarum haanii* v. Siebold: [8], 2 inds.
299. *Scopimera globosa* Haan: [8], 7 inds.; [9], 4 inds.; [10], 4 inds.
300. *Sphaeroma* sp.: [9], circ. 20 inds.
301. *Squilla oratoria* Haan: [9], 7 inds.; [10], 2 inds.
302. *Telphusa berardii* Aud.: [9], 4 inds.
303. *Telphusa dehaani*: [11], 12 inds.
304. *Thelphusa berardii* Aud.: [8], 3 inds.; [10], 10 inds.
305. *Trichocera gibbosula* W. d. H.: [9], 2 inds.
306. *Xantho distinguendus* W. d. H.: [8], 1 ind.; [9], 2 inds.
307. *Xantho granulatus* W. d. H.: [9], 6 inds.
- <Myriapods>**
308. *Scolopendra damnosa* L. Kch.: [12], 8 inds.; including some specimens of *S. mutilans* (NHNW Inv. Nr. 738) and probably also those of *S. subspinipes japonica* Koch (NHNW Inv. Nr. 762), see Koch (1878, pp. 789-792).
- Phylum Brachiopoda**
309. *Lingula anatina* Lk: [15], 3 inds., Oshima; one of the three now available as "Coll. Musei Vindobonensis, Mollusca, Inv. No. 73274, *Lingula smaragdina* Ads., Roretz, 1875, Oshima, Japan"; represented by Roretz's (1875, p. 554) record in Oshima, now in the city of Kumamoto, of "eine früher in Japan noch nicht gefundene *Lingula*" (Fig. 1C).
- Phylum Echinodermata**
310. *Amphiura laevis* Lym.: [6], 2 inds.
311. *Ankyroderma roretzii* (Marenzeller) [the catalogue lacking the authorship]: [3], 1 ind., probably the holotype of *Haplodactyla roretzii* Marenzeller (see Marenzeller, 1878, p. 387; also see Marenzeller, 1882, pp. 124-126; cf. Jangoux and De Ridder, 1990).
312. *Antedon serrata* A. H. Clark: [3], 2 inds.
313. *Asterias calamaria* Gray: [2], 2 inds.
314. *Asterina burtonii* Gray: [2], 5 inds.
315. *Asterina*: [5], 1 ind.
316. *Astropecten japonica* M. Ed: [2], 2 inds.
317. *Astropecten polyacanthus* M. Ed: [2], 2 inds.
318. *Colochirus armatus* Marenz.: [3], 4 inds., probably the syntypes, see Marenzeller (1882, pp. 132-134); [5], 4 inds.; [7], 18 inds.
319. *Colochirus inornatus* Marenz.: [4], 6 inds., probably including the holotype of this

- species, see Marenzeller (1882, pp. 130-132).
320. *Cucumaria echinata* Marenz.: [3], 5 inds., probably the syntypes, see Marenzeller (1882, pp. 127-128)
321. *Cucumaria longipeda* Semp.: [3], 2 inds., described by Marenzeller (1882, pp. 128-129).
322. *Echinarachnius mirabilis*: [1], 3 inds.
323. *Echinaster*: [2], 2 inds.
324. *Echinaster*: [5], 1 ind.
325. *Echinocardium australe* Gray: [2], 1 ind.; [5], 3 inds.; [7], 3 inds.
326. *Holothuria*: [2], 1 ind.
327. *Linckia semiregularis* M. E.: [1], 1 ind.
328. *Luidia*: [2], 1 ind.
329. *Ophioglypha sinensis* Cym.: [3], 4 inds.; [7], 6 inds.
330. *Ophionephtys phalerata* Lym.: [5], 1 ind.
331. *Ophiopholis*: [3], 1 ind.
332. *Ophioplocus imbricatus* Mich Tr: [3], 2 inds.
333. *Ophiothrix stelligera* Lym.: [3], 3 inds.; [7], 15 inds.
334. *Ophiothrix*: [1], 3 inds.
335. *Ophiothrix*: [2], 3 inds.
336. *Orcula hypsipyrge* Marenz.: [3], 1 ind., probably the holotype, see Marenzeller (1882, pp. 135-136).
337. *Parasalenus grabosa* A. Ag: [2], 2 inds.
338. *Schiraster japonicus* Ag.: [3], 2 inds.
339. *Sphaerechinus pulcherrimus* Barn: [2], 2 inds.+ 2 inds.
340. *Stichopus japonicus* Sel.: [4], 5 inds., described by Marenzeller (1882, pp. 136-137).
341. *Strongylocentrotus depressus* C. G.: [2], 2 inds.+ 1 ind.
342. *Synapta autopista* Marenz.: [3], 1 ind., probably not the holotype of this species; the holotype of *S. autopista* was "gefunden in der Bucht von Miya (Dr. Körbl)" (Marenzeller, 1882, p.123), not collected by Roretz.
343. *Synapta ooplax* Marenz.: [3], 6 inds., probably including the syntypes, see Marenzeller (1882, pp. 122-123); [7], 8 inds.

344. *Temnopleurus hardwicki* Gray: [2], 4 inds.+ 4 inds. + 6 inds.
345. *Temnopleurus reynaudi* Ag.: [2], 1 ind.; [3], 3 inds.
346. *Temnopleurus toreumaticus* Reeve: [2], 5 inds.
347. *Temnopleurus*: [2], 1 ind.
348. *Thyone saccella* Lec.: [4], 1 ind., described by Marenzeller (1882, p. 134).
349. *Thyonidium japonicum* Marenz.: [3], 3 inds., probably including the holotype, see Marenzeller (1882, pp. 134-135).

#### Phylum Chordata: Subphylum Urochordata

350. *Cynthia* sp.: [15], 1 ind.
351. *Cynthia* : [16], 1 ind.
352. *Cynthia* : [16], 1 ind.
353. *Cynthia* : [16], 1 ind.
354. *Cynthia* : [16], 2 inds.
355. *Cynthia* : [16], 2 inds.
356. *Phallusia* sp.: [15], 1 ind.

(Notes: Drasche (1884) described the following species of ascidians in the Roretz collection: *Cynthia sacciformis* n. sp. (= *Pyura sacciformis*; the holotype registered as NHMW-Mollusca IN 74666), *Cynthia roretzii* n. sp. (= *Halocynthia roretzi*; the holotype as NHMW Mollusca IN 101017), and *Styela clava* Herdman (one individual as NHMW-Mollusca IN 101019 and three as NHMW-Mollusca IN 101018).

#### Phylum Chordata: Subphylum Vertebrata

##### <Fishes>

357. *Gasterosteus aculeatus* var. *gymnurus*: [19], 4 inds., Yokohama.

##### <Amphibians>

358. *Bufo japonicus*: [20], 1 ind.
359. *Rana nigromaculata*: [20], 1 ind.

##### <Mammals>

360. *Mus musculus*; [21], 1 ind.
361. *Pipistrellus javanicus*: [21], 1 ind., registered in 1877, given by H. Erber.
362. *Urotrichus talpoides*: [21], 1 ind.

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## アルブレヒト・フォン・ローレツが日本で採集した動物標本のリスト — ウィーン自然史博物館のカタログ調査から —

西川輝昭 (名古屋大学博物館)・Helmut Sattmann (ウィーン自然史博物館)

オーストリア出身のお雇い外国人教師Dr. Albrecht von Roretzは、1874年から1882年まで日本に滞在した。その間に彼が折にふれて日本各地から精力的に採集した動物標本は当時のウィーン王室博物館に送られ、一部は分類学的研究に供せられた。この標本群(ローレツコレクション)は現在、ウィーン自然史博物館に引き継がれている。その全容解明のために、おもに当時の受け入れカタログに基づいて標本リストを作成した。その結果、海綿動物から哺乳類にわたるさまざまな動物群の標本が、計約360種、1450個体以上含まれることがわかった。学名の基礎となる担名タイプ標本は、紐形動物、環形動物多毛類、ユムシ動物、節足動物蛛形類・昆虫類・多足類・鰓尾類、棘皮動物ナマコ類、および脊索動物ホヤ類の各動物群の標本中に見出された。