

Return to sender: Hydrozoa collected by Emperor Hirohito of Japan in the 1930s and studied in Brussels

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ABSTRACT: A small number of Hydrozoa specimens, collected by Emperor Hirohito of Japan in Sagami Bay in the 1930s, was re-discovered in the Royal Belgian Institute of Natural Sciences in Brussels. The history of the collection is described here; part of it has been returned to the Showa Memorial Institute in Japan.

KEY WORDS : Cnidaria – Sagami Bay – collection management – types.

ABSTRACT: Een klein aantal Hydrozoa specimens ingezameld door de Japanse Keizer Hirohito in de Baai van Sagami in de jaren 1930 werd gevonden op de schappen van het Koninklijk Belgisch Instituut voor Natuurwetenschappen in Brussel. De geschiedenis van de collectie wordt hier beschreven; een deel ervan werd teruggestuurd naar het Showa Herdenkingsinstituut in Japan.

SLEUTELWOORDEN : Cnidaria – Baai van Sagami – collectiebeheer – types.

In this paper, I report a case of good practice in international co-operative taxonomic research. Unfortunate circumstances meant that some material sent for identification was never returned to its rightful owner. The narrative relates to a small number of Hydrozoa collected in the first part of twentieth century by His Majesty the Showa Emperor of Japan (1901–1989) in Sagami Bay. It includes type specimens of three species and one variety, the whereabouts of which had been unknown until now.

During a thorough check of the invertebrate collections of the Royal Belgian Institute of Natural Sciences (RBINS) in Brussels, two boxes filled with cardboard-wrapped packets, which were clearly labelled “Japon”, and an alcohol-filled glass jar holding 20 tubes, again marked “Japon”, were found (Figure 1). The archives of the RBINS revealed the interesting origin and history of this collection of hydrozoans.

On 22 January 1936 Dr Hirotarô Hattori (1875–1965) of the Biological Laboratory of the Imperial Palace in Tokyo contacted Dr Eugène Leloup (1902–1981) of the RBINS. Hattori was the biology professor of the Japanese Showa Emperor Hirohito, teaching the Emperor marine biology. Hattori often accompanied Emperor Hirohito on his expeditions to Sagami Bay near Tokyo to collect marine specimens, especially Hydrozoa, a taxon in which the Emperor had a profound interest and on which he had published extensively (Hirohito Showa Emperor of Japan 1967, 1969, 1971, 1974, 1977, 1983, 1984, 1988, 1995). In his letter, Hattori mentioned that the Emperor of Japan had been collecting and studying hydroids but that identification was difficult because crucial literature and reference



Figure 1. An unexpected find in the Invertebrates collection of Royal Belgian Institute of Natural Sciences; a small Hydrozoa collection from Sagami Bay, Japan.

specimens were lacking.¹ On 14 February 1936, Leloup responded in French², indicating that it would be his pleasure to help, and that he would send some of his reprints for the library of the Marine Laboratory of the Imperial Palace, thereby cementing future co-operation. On 5 May 1936 Hattori responded to Leloup, thanking him for the reprints. The associated postage costs were mentioned in Hattori's letter in the following polite manner: "The reprints you kindly sent us have safely arrived without stamp, but we have borne no extra expense as a result. Please don't make yourself uneasy about it."³

Two boxes containing Hydrozoa arrived in Brussels later that year and Leloup immediately started identifying the specimens. This prompt action allowed him to brief Hattori on 22 October 1936, saying that he had made good progress, but that he would like to know if Hattori would consider whether the *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique* was an appropriate periodical in which to publish his results and thus avoid additional expense. Leloup ended his letter: "J'espère avoir terminé complètement ce travail vers le milieu de l'année 1937."⁴ In a short letter dated 10 December 1936⁵, Hattori accepted the proposition about publishing in the *Bulletin*, and on 6 December 1937⁶ Leloup informed Hattori that he had finished his manuscript and announced that a species and a variety new to science, and eight new records for Japanese waters, had been determined.

On 8 September 1938, Leloup informed Hattori that he would return the specimens to Japan, together with five reprints of the publication describing them (Leloup 1938). His letter also listed the identifications.⁷ On 14 November 1938, a letter arrived in Brussels in which Hattori thanked Leloup and at the same time informed him that after scrutinizing the paper and the returned samples, the Japanese team had experienced some problems with the identification of some of the specimens. Hattori told Leloup that "We are now preparing as soon as possible, some preparations for questionable species and after re-examining them, I shall ask your suggestion about them again."⁸

In March 1939, 79 microscope slide preparations were sent to Brussels, together with 20 tubes with the specimens used for making them. Tubes numbered 1 to 16 were reported to hold the specimens which Leloup had sent back in September 1938, whereas tubes 17 to 20 held new material. Hattori informed Leloup that he had “made the preparates of each to know the species definitely and I ask your kindness to write the specific names on each preparate and send back to me.”⁹ With regard to the tubes, Hattori wrote: “Please keep these materials in your laboratory for future reference.”

On 27 April 1939, Leloup informed Hattori that some of the slides (numbered 63–69) might hold another species new to science: “pour le cas ou cette hypothèse se confirmerait, je suppose que vous ne verrez aucun inconvénient à ce que je les dénomme *Sertularia hattorii*.”¹⁰ In the same letter Leloup promised to send back the material once his investigations were finished, and on 4 May 1939 he wrote to Hattori informing him that he had nearly finished his study and that the wet collection held additional species, but that he would need the exact collecting localities of the specimens tubes 17 to 20.¹¹ Responding on 15 June 1939, Hattori sent a map of Tokyo Bay and Sagami Bay (Figure 2) on which the sampling points of tubes 17 to 20 were indicated.¹²

On 15 November 1939, Hattori enquired about the progress Leloup was making. He used the opportunity to tell Leloup that “we are quite uneasy on the estimation for the outbreak of second great war in Europe. It is a matter for regret.” He used a stamp issued on the occasion of the seventy fifth anniversary of the Red Cross Society of Japan, and commented that this Society is a “memorial assembly for the international works of charity”.¹³ On 25 January 1940, Leloup informed Hattori that he had finished a paper

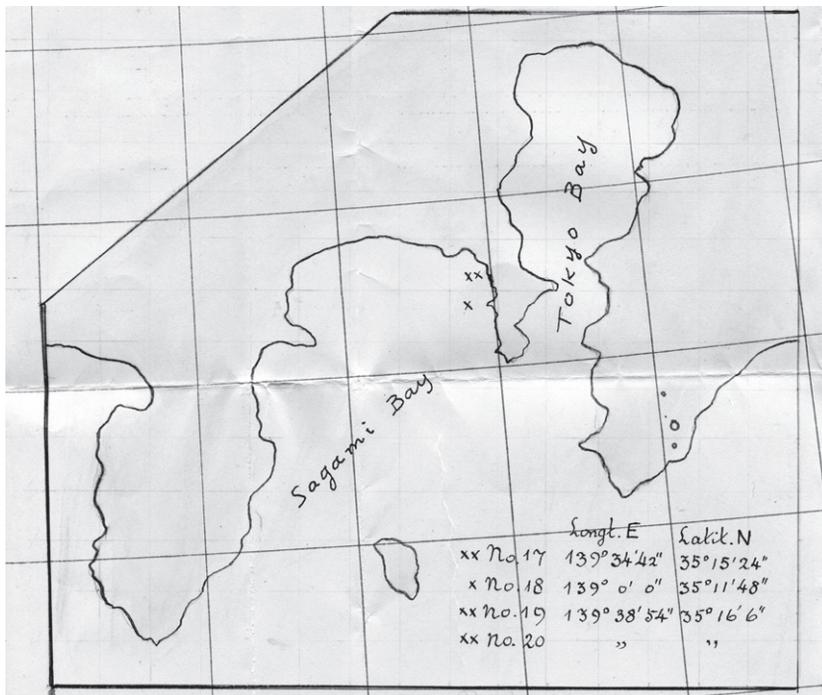


Figure 2. Details from a sketch-map of Japan showing sampling points for tubes 17 to 20 (reduced; original dimensions 13 × 15 cm).

describing five species, two of them new to science, and that this would soon be published (Leloup 1940a). He mentioned that he had carefully put aside the microscopic slides and that he will return them once the risks of destruction were less. He concluded by expressing the hope that the collections would not suffer any damage in Brussels and also thanked Hattori for the anniversary postage stamp.¹⁴

On 6 March 1940, Hattori's response regarding the microscope slides was received: "I am very sorry to trouble you so much to send back the preparats of our collection on Hydroid, but they should be kept in our laboratory as authoritative specimens for our future research, and it is a reason that I ask a favour of you." In the same handwritten letter Hattori asked if he could send more specimens that his team found difficult to identify.¹⁵ On 16 May 1940 he wrote again to thank Leloup for sending a number of his reprints, but also with a question regarding the differences between two species.¹⁶

On 23 January 1941, without giving any reasons for the delay, Leloup wrote to Hattori informing him that he was back at work after eight months' absence.¹⁷ He elaborately resolved the taxonomic question that had been addressed to him eight months earlier. Accompanying his letter was a detailed list of the identified specimens. Leloup added: "Je vais encore garder quelque temps les préparations et les tubes."¹⁸ He agreed to identify more material, but asked that this should not be sent in the near future as his interests at that time were with siphonophores (another group of hydrozooids).

Possibly to his surprise, in October 1949, Leloup received a copy of *Opisthobranchia of Sagami Bay collected by his Majesty the Emperor of Japan* (Baba 1949). This was a personal gift from His Majesty The Emperor according to a letter from the Grand Chamberlain.¹⁹ On 18 January 1950, a letter of praise for the quality of the book left Brussels, Leloup concluding: "En vous réitérant l'expression de mes respectueux hommages pour S. M. l'Empereur, je vous prie d'agr  er, Monsieur le Grand Chambellan, l'assurance de ma tr  s haute consid  ration."²⁰

There is a two-year gap in the archival record, until, on 3 April 1952, the director of the RBINS informed Leloup that Hirotaro Hattori's son, Fran  ois C. Hattori wished to meet Leloup on the recommendation of his father. Leloup agreed to meet Mr Hattori when he visited Brussels on 21 or 22 May 1952. The subject of their meeting is not recorded. After this, only two more letters²¹ were exchanged between Leloup and Hirotaro Hattori and his son but the Hydrozoa collection was not mentioned and seems to have been forgotten. The tubes and slides remained in the RBINS research collections, seemingly untouched (a handwritten note by Leloup with his identifications is still included), and very well preserved. But has it really remained untouched?

A further search through the general reference collection showed that this is not the case. Sub-samples were found of both the specimens in alcohol and the specimens mounted on microscope slides from the first lot of hydrozoa sent to Brussels in 1936. These were recorded with a brief description – "Une petite collection d'Hydropolypes r  colt  e par La Majest   l'Empereur du Japon dans la baie de Sagami" – on 9 September 1939 under the RBINS General Inventory number 11891. Of the second lot sent to the RBINS in 1939, no trace can be found, apart from *Ptilocodium repens* which is also documented in the collection.

DISCUSSION

Given the excellent relations between Hattori and Leloup (and, by extension, the Showa Emperor), it could be perceived strange that the microscope slides were never returned

to Japan, especially since Hattori clearly asked for them back. Undoubtedly the uncertainties associated with sending packages during the Second World War interfered. Another reason possibly rests with the fact that over the years Leloup's attention shifted to several other taxa, notably siphonophores and chitons. In fact, after the papers concerning the Emperor's material (Leloup 1938, 1940a), Leloup published only six more papers on Hydrozoa (Leloup 1940b, 1942, 1952, 1960, 1971, 1974), whereas he wrote 165 papers on other taxa.

Given that this small collection has been rediscovered and fully documented, the microscope slides have been returned to the reference collection of the Biological Laboratory of the Imperial Household, which is now deposited in the Showa Memorial Institute of the National Museum of Nature and Science in Tsukuba City (Namikawa 2008). This action is especially important for the three species and one variety described by Leloup, as it will permanently fix the whereabouts of the types. Thus both institutes possess syntypes: a 'win-win' situation that, when accomplished, will have survived the largest ever conflict among our species, the Second World War.

ACKNOWLEDGEMENTS

I wish to express my thanks to the curators and the technical staff of the Invertebrates Department of the RBINS for maintaining this reference collection in perfect state since it was received on loan in 1939. I also wish to thank the RBINS staff, which has safeguarded the rich archive through the years. Many thanks also go to Dr H. Namikawa of the Showa Memorial Institute for checking the diary of Hattori. I am also in debt to Dr J. Van Goethem and Dr T. Backeljau of the RBINS who were so kind as to criticize the first draft of this manuscript. Finally, I thank an anonymous referee for suggesting improvements to the text.

NOTES

¹ H. Hattori (hereafter HH) to E. Leloup (hereafter EL), 22 January 1936 (in English): Royal Belgian Institute of Natural Sciences archives (hereafter RBINS).

² EL to HH, handwritten draft (in French) dated 14 February 1936: RBINS.

In the archive of the RBINS, I discovered the handwritten draft response of Leloup to Hattori. As it was custom at that time that handwritten draft letters were typed over, it can, with quite some certitude, be assumed the letter that arrived in Japan was the same in content, style and date.

³ HH to EL, 5 May 1936 (typed letter, in English): RBINS.

⁴ "I hope to have finished this work completely by the mid of 1937": EL to HH, handwritten draft (in French) dated 22 October 1936: RBINS.

⁵ HH to EL, 10 December 1936 (typed letter, in English): RBINS.

⁶ EL to HH, handwritten draft (in French) dated 6 December 1937: RBINS.

⁷ EL to HH, 8 September 1938 (carbon copy, in French): RBINS.

⁸ HH to EL, 14 November 1938 (typed letter, in English): RBINS.

⁹ HH to EL, 6 March 1939 (typed letter, in English): RBINS.

¹⁰ "In case this hypothesis can be confirmed, I suppose you would not see any objections if I would name it *Sertularia hattorii*": EL to HH, 27 April 1939 (carbon copy, in French): RBINS.

¹¹ EL to HH, 4 May 1939 (carbon copy, in French): RBINS.

¹² HH to EL, 15 June 1939 (handwritten letter, in English): RBINS.

¹³ HH to EL, 15 November 1939 (handwritten letter, in English): RBINS.

¹⁴ EL to HH, 25 January 1940 (carbon copy, in French): RBINS.

¹⁵ HH to EL, 6 March 1940 (handwritten letter, in English): RBINS.

- ¹⁶ HH to EL, 16 May 1940 (typed letter, in English): RBINS.
- ¹⁷ The archive of the administration of the RBINS states that Leloup was imprisoned in Germany (prisoner N°11324, Arbeitskommando 112, Stalag XB in Sandbostel and later Arbeitskommando 122, Stalag XC in Nienburg) during that time. EL to HH, 23 January 1941(carbon copy, in French): RBINS archives.
- ¹⁸ “I will hold on to the preparations and the tubes for some time”. EL to HH, 23 January 1941 (carbon copy in French): RBINS.
- ¹⁹ Grand Chamberlain to EL, 24 October 1949 (typed letter, in English): RBINS.
- ²⁰ EL to HH, 23 January 1941 (typed copy, in French): RBINS.
- ²¹ EL to F.CH, 5 July 1952 (typed copy, in French): RBINS archives EL to HH, 6 November 1952 (typed copy, in French): RBINS.
- ²² Within the World Register of Marine Species (WoRMS), the Hydrozoa can be found at <http://www.marinespecies.org/hydrozoa>, section of WoRMS edited by Dr P. Schuchert.
- ²³ Not in WoRMS, but here considered as valid.
- ²⁴ Not in WoRMS; Bouillon *et al* (1995) was followed to determine the synonymy.

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APPENDIX: Japanese Hydrozoa identified by E. Leloup

Species are arranged alphabetically by generic names, not systematically. Some of Leloup's identifications have not been published hitherto and were only found in the correspondence between Leloup and Hattori; these are marked *. Leloup's new taxa and type specimens are indicated in **bold**.

Current synonyms and new combinations from the Hydrozoa section (edited by Dr P. Schuchert) of the World Register of Marine Species (WoRMS) (URL <http://www.marinespecies.org/hydrozoa>, accessed January 2013) are given in curled brackets { }.²²

	tubes sent by Hattori	slides sent by Hattori	RBINS collection numbers (INV)
<i>Antennella secundaria</i> (Gmelin, 1791)	5, 8, 10	70–79	40916\1, 40917\1, 41070, 41275\3
* ? <i>Calycella syringa</i> (Linnaeus, 1767)	8, 16	25, 26	—
<i>Campanularia africana</i> Stechow, 1923	10	35	41274\3, 43100
<i>Campanularia groenlandica</i> Levinsen, 1893	9, 11	36–40	41344\1, 43120, 43121, 43122
<i>Diplocyathus dichotomus</i> Allman, 1888 { = <i>Hydrodendron dichotomum</i> (Allman, 1880)}	7	—	40755, 40757, 40756, 40758
<i>Diplocyathus sibogae</i> Billard, 1929 { = <i>Hydrodendron sibogae</i> (Billard, 1929)}	6	—	40759, 40760
<i>Dynamena cornicina</i> McCrady, 1859 { = <i>Dynamena disticha</i> (Bosc, 1802)}	10	45, 46	41274\4, 42148
<i>Dynamena quadridentata</i> var. <i>elongata</i> Stechow & Müller, 1923 { = <i>Dynamena</i> <i>quadridentata</i> (Ellis & Solander, 1786)}	16	47–50	40823\5, 42306, 42307
<i>Eudendrium capillare</i> Alder, 1868	11	8–10	43121\1, 43122\1
<i>Filellum serratum</i> (Clarke, 1879)	12, 13	20–24	41223, 41441\1, 41442\1, 41224, 41225
<i>Grammaria scandens</i> Stechow, 1913 { = <i>Grammaria borealis</i> (Levinsen, 1893)}	10	—	41274\2
<i>Halecium flexile</i> var. <i>japonica</i> Leloup, 1938 { = <i>Halecium flexile</i> Allman, 1888; <i>Halecium</i> <i>delicatulum</i> Coughtrey, 1876}	16	11–14	40822, 40823, 43708\2
<i>Halecium nanum</i> Alder, 1859	5	—	40915, 40916, 40917, 41275\1

<i>Halopteris campanula</i> (Busk, 1852)	15	—	41099, 41431\1
<i>Hebella brevitheca</i> Leloup, 1938²³	10, 11	—	41249, 41250, 41251, 41274, 41247, 41248, 43122\3
<i>Hebella parasitica</i> (Ciam ician, 1880) { = <i>Anthohebella parasitica</i> (Ciamician, 1880)}	5, 16	15–17	41275, 40823\4, 42307\1, 43708\3
<i>Hydractinia epiconcha</i> Stechow, 1908	2, 3, 4	—	38523, 38524, 38525
<i>Lafoea fruticosa</i> (M. Sars, 1851) { = <i>Lafoea dumosa</i> (Fleming, 1820)}	8, 9, 10	18, 19	41331, 41344, 41225\1, 41274\1, 40758\1, 41332
<i>Laomedea delicatula</i> (Thornely, 1899) { = <i>Clytia delicatula</i> (Thornely, 1900)}	8	29	43491, 43492
<i>Laomedea dichotoma</i> (Linnaeus, 1758) { = <i>Obelia dichotoma</i> (Linnaeus, 1758)}	16	30–34	40823\2, 43706\1, 43708\1
<i>Laomedea longicyatha</i> (Allman, 1877) ²⁴ { = <i>Obelia bidentata</i> Clark, 1875}	14	—	43670
<i>Laomedea raridentata</i> (Alder, 1862) ²⁴ { = <i>Clytia hemisphaerica</i> (Linnaeus, 1758)}	16	27, 28	40823\3, 43706, 43707, 43708
<i>Lytocarpus phoeniceus</i> (Busk, 1852) { = <i>Macrorhynchia phoenicea</i> (Busk, 1852)}	9, 10, 11	79	40371, 41036, 41037, 41248\1, 41249\1, 41250\1, 41251\1, 41274\6, 41344\3, 43122\2
<i>Perigonimus pusillus</i> (Wright, 1857) ²⁴ { = <i>Leuckartiara octona</i> (Fleming, 1823)}	9	5–7	38743, 41344\2
<i>Ptilocodium repens</i> Coward, 1909	1	1–4	38791
<i>Sertularella costata</i> Leloup, 1940	8	57, 58	—
* <i>Sertularella elongata</i> f. <i>peculiaris</i>	5	59, 60	—
<i>Sertularia distans</i> var. <i>gracilis</i> Hassall, 1853 { = <i>Sertularia distans</i> (Lamouroux, 1816)}	10	51–56	41274\5, 42804
<i>Sertularella levigata</i> Stechow, 1931	5	—	—
<i>Sertularia hattorii</i> Leloup, 1940	10, 19, 20	63–69	—
* <i>Sertularia</i> sp.	16	43, 44	—
<i>Symplectoscyphus tricuspидatus</i> (Alder, 1857)	16	61, 62	40822\1, 40823\1, 42954, 43707\1
<i>Synthecium cylindricum</i> var. <i>pusilla</i> Ritchie, 1910 { = <i>Hincksella cylindrica</i> (Bale, 1888)}	10	41	—
<i>Synthecium tubithecum</i> (Allman, 1877)	5, 16	42	40823\6, 41275\2
<i>Zygophylax biarmata</i> Billard, 1905	14	—	41428, 41430
<i>Zygophylax cervicornis</i> (Nutting, 1905)	15	—	41431, 41432
<i>Zygophylax pacifica</i> Stechow, 1920	12, 13	—	41441, 41444, 41442, 41443