

## **Kumiko Matsui, Ph.D.**

10th Street Northwest & Constitution Ave. NW

Washington, DC 20560 the USA

+1 (202) 621-3674

**MatsuiK@si.edu/kumiko\_matsui@me.com/kumiko.matsui.jp@gmail.com**

*Last updated: January, 2023*

**Research Keywords:** marine mammal, Desmostylia, Cetacea, Sirenia, endocast, inner ear, paleoneurology, ammonoid, 3D

### **Current position:**

2021– JSPS Cross-border Postdoctoral Research Fellow at National Museum of Natural History, Smithsonian Institution

2019– JSPS Cross-border postdoctoral research fellow at the Kyushu University Museum, Kyushu University

### **Past appointments:**

2018–2020 Associate researcher at the University Museum, the University of Tokyo

2019 JSPS Postdoctoral Research Fellow at the Kyushu University Museum, Kyushu University

2018–2019 Research specialist at the Kyushu University Museum, Kyushu University

2017–2018 JSPS Postdoctoral research fellow at National Museum of Nature and Science, Japan

2016–2017 JSPS DC2 (Doctoral Course Students2) fellow at the University of Tokyo

2014–2016 Research Assistant at the University of Tokyo

### **Education:**

#### ***Ph.D. in Science March 2017***

The University of Tokyo, Hongo, Tokyo, Japan.

Adviser: Takanobu Tsuihiji (Paleobiology)

Title: Quantitative analysis of aquatic adaptation in Desmostylia (Mammalia) based on cranial characteristics

certificate number: 博理第6538号

The period of attendance at school: 4/1/2014–3/23/2017

#### ***MA in Science March 2014***

Kyoto University, Kyoto, Kyoto, Japan

Adviser: Hajime Naruse (Sedimentology)

Title: Spatio-temporal distribution of *Paleoparadoxia*: Implications from the occurrence of the oldest *Paleoparadoxia* (Mammalia: Desmostylia) from the Chikubetsu area, northwestern Hokkaido, Japan

certificate number: 理修第9686号

The period of attendance at school: 4/1/2012–3/24/2014

#### ***BA in Science March 2012***

University of Tsukuba, Tsukuba, Ibaraki, Japan

Adviser: Katsuo Sashida (Paleontology)

Title: A study on habitat depth of Japanese Desmostylia

certificate number: 地球第97号

The period of attendance at school: 4/1/2008–3/23/2012

## **Teaching Experience**

2021 Part-time lecturer at Hobetsu Museum, Hokkaido, Japan.

2019 Part-time lecturer at the National Museum of Nature and Science, Tsukuba, Japan.

2015 Teaching assistant at the Department of Science, the University of Tokyo, Japan.

2012–2015 Part-time lecturer at Mizunami Fossil Museum, Gifu, Japan.

2012–2013 Teaching assistant at the Department of Science, Kyoto University, Kyoto, Japan.

## **Research Funding**

1. The rehabilitation of USGS fossil marine mammal collections through digitization and digital preparation  
Founder: Deep Time MacMillan Fund, the National Museum of Natural History, Smithsonian Institution (Washington DC, USA)  
Total funding amount: \$9,609.00  
Project years: 2022-7 to 2022-12
2. From artisanship to amateur: establishment of the automatic identification system of large fossils  
Founder: Japan Society for the Promotion of Science (Tokyo)  
GRANT NUMBER: 21K14031  
Total funding amount: JPY 4,550,000  
Project years: 2021-4 to 2024-03
3. Mammal-like dentition patterns in fishes: a unique parallel evolution in Paleogene pycnodonts.  
Founder: Kyushu University (Fukuoka, Fukuoka)  
GRANT NUMBER: 02219  
Total funding amount: JPY 1,000,000  
Project years: 2020-10 to 2021-03
4. Building an automatic identification system for fossils by using deep learning based on 2D/3D data  
Founder: Kyushu University (Fukuoka, Fukuoka)  
GRANT NUMBER: 01220  
Total funding amount: JPY 1,594,000  
Project years: 2019-07 to 2020-03
5. Evolutionally history of marine adaptation and survival strategy of marine mammals  
Founder: Japan Society for the Promotion of Science (Tokyo)  
GRANT NUMBER: 19J00741  
Total funding amount: JPY 19,500,000  
Project years: 2019-10 to 2024-03
6. Clarification of marine adaptation and survival strategy of marine mammals  
Founder: The Sasakawa Scientific Research Grant, The Japan Science Society (JSS)

GRANT NUMBER: 2018-6028  
Total funding amount: JPY 710,000  
Project year(s): 2018-04 – 2019-03

7. Clarification of desmostylian aquatic adaptation based on cranial characteristics  
Founder: Japan Society for the Promotion of Science (Tokyo)  
GRANT NUMBER: 16J00546  
Total funding amount: JPY 2,300,000  
Project years: 2016-04 – 2018-03

## **Awards**

1. Research Fellowship for Young Scientist (Cross-border Postdoctoral Fellow (CPD))  
Founder: Japan Society for the Promotion of Science (Tokyo)  
Total funding amount: JPY 19,624,000  
Project years: 2019-10 – 2024-03
2. Research Fellowship for Young Scientist (Postdoctoral Fellow (PD))  
Founder: Japan Society for the Promotion of Science (Tokyo)  
Total funding amount: JPY 2,172,000  
Project years: 2019-04 – 2019-09
3. Research Fellowship for Young Scientist (Doctoral Course Students (DC2))  
Founder: Japan Society for the Promotion of Science (Tokyo)  
Total funding amount: JPY 4,800,000  
Project years: 2016-04 – 2018-03
4. Jackson School of Geosciences Student Travel Grant  
Founder: The Society of Vertebrate Paleontology  
Total funding amount: USD 600  
Date: 2015-10
5. Iwadare Scholarship for graduate student  
Founder: Iwadare Scholarship Foundation  
Total funding amount: JPY 600,000  
Year: 2014-04 – 2015-03
6. Repayment Exemption for Students with Excellent Grades  
Founder: Japan Student Services Organization (JASSO)  
Total funding amount: JPY 1,200,000  
Years: 2012-04 – 2014-03
7. Takekoshi Prize and Research Grant  
Founder: Graduate School of Science, Kyoto University  
Total funding amount: JPY 200,000  
Project years: 2013-06 – 2014-03  
Awarded date: June 24th, 2013

## **Publications**

### **Peer-reviewed**

1. **Kumiko Matsui**, Ana M. Valenzuela-Toro, Nicholas D. Pyenson (2022) New data from the first discovered paleoparadoxiid (Desmostylia) specimen shed light into the morphological variation of the genus *Neoparadoxia*. *Scientific Reports* 12, 14246. DOI: 10.1038/s41598-022-18295-5
2. **Kumiko Matsui**, Yuri Kimura (2022) Museum exhibitions of fossil specimens into commercial products: Unexpected outflow of 3D models due to unwritten image policies. *Frontiers in Earth Science* 10: 874736. DOI: 10.3389/feart.2022.874736
3. **Kumiko Matsui**, Yuri Kimura (2022) A “Mammalian-Like” Pycnodont Fish: Independent Acquisition of Thecodont Implantation, True Vertical Replacement, and Carnassial Dentitions in Carnivorous Mammals and a Peculiar Group of Pycnodont Fish. *Life* 12: 250. DOI: 10.3390/life12020250
4. Soichiro Kawabe, Yusuke Ando, Shigenori Kawano, **Kumiko Matsui** (2021) New record of a rostrum of waterbird (Aves, Suliformes) from the Oligocene of Ashiya Group in Ainoshima Island, Kyushu, Japan. *Bulletin of Kitakyushu Museum of Natural History and Human. Series A*. 19: 35-39. DOI: 10.34522/kmnh.19.0\_35
5. **Kumiko Matsui** (2021) Book Review: My winding road to paleontology. *Fossil* 109: 35-36. DOI: 10.14825/kaseki.109.0\_29
6. **Kumiko Matsui**, Haruyoshi Maeda (2020) Book Review: Notes for Fundamental Physical Geology. *Fossil* 108:49. DOI: 10.14825/kaseki.108.0\_42
7. Tomoki Karasawa, **Kumiko Matsui** (2020) Interacting with the untouchable: utilization of multimedia-based visual contents of Japan’s National Monument, the *Taniwhasaurus mikasaensis* (Mosasauridae) holotype for educational workshops at Mikasa City Museum. *Fossil* 108: 3-10. DOI: 10.14825/kaseki.108.0\_3
8. **Kumiko Matsui**, Tomoki Karasawa (2020) 3D models related to the publication: Touching the untouchable: utilization of 3D distal data of Japan’s National Monument “*Taniwhasaurus mikasaensis* (Mosasauridae)” for educational workshops in Mikasa City Museum. *MorphoMuseum*. DOI: 10.18563/journal.m3.106
9. **Kumiko Matsui**, Takanobu Tsuihiji (2019) The phylogeny of desmostylians revisited: proposal of new clades based on robust phylogenetic hypotheses. *PeerJ* 7, e7430. DOI: 10.7717/peerj.7430
10. Tatsuya Shinmura, **Kumiko Matsui** (2019) Life appearances of Desmostylia using a three-dimensional computer graphics (3D CG). *Fossil* 106, 1-2. DOI: 10.14825/kaseki.106.0\_1
11. **Kumiko Matsui**, Yuri Kimura, Mitsuhiro Nagata, Hiroaki Inose, Kazuya Ikeda, Brian Lee Beatty, Hideyuki Obayashi, Takafumi Hirata, Shigeru Otoh, Tatsuya Shinmura, Sachiko Agematsu, Katsuo Sashida (2018) A long-forgotten ‘dinosaur’ bone from a museum cabinet, uncovered to be a Japan’s iconic extinct mammal, *Paleoparadoxia* (Desmostylia, Mammalia). *Royal Society Open Science* 5, 172441. DOI: 10.1098/rsos.172441
12. **Kumiko Matsui** (2017) How can we reliably identify a taxon based on humeral morphology? Comparative morphology of desmostylian humeri. *PeerJ* 5, e4011. DOI: 10.7717/peerj.4011

13. **Kumiko Matsui**, Katsuo Sashida, Sachiko Agematsu, Naoki Kohno (2017) Habitat preferences of the enigmatic Miocene tethythere *Desmostylus* and *Paleoparadoxia* (Desmostylia; Mammalia) inferred from the depositional depth of fossil occurrences in the Northwestern Pacific realm. *Palaeogeography, Palaeoclimatology, Palaeoecology* 471, 254-265. DOI: 10.1016/j.palaeo.2017.02.005
14. **Kumiko Matsui**, Katsuo Sashida, Sachiko Agematsu (2016) Latest Jurassic to Cretaceous radiolarians from the Miocene Chichibumachi Formation, Akahira Group, central Japan. *Journal of Geological society of Japan* 122, 261-266. DOI:10.5575/geosoc.2016.0016
15. **Kumiko Matsui**, Soichiro Kawabe (2015) The oldest record of *Paleoparadoxia* from the Northwest Pacific with an implication on the early evolution of *Paleoparadoxiinae* (Mammalia: Desmostylia). *Paleontological Research*, 19, 251-265. DOI: 10.2517/2015PR007
16. Yoshikazu Hasegawa, Kiyohide Asami, Toshiyuki Kimura, **Kumiko Matsui**, Naoki Kohno (2014) On the Early Miocene *Paleoparadoxia* from the Upper Sankebetsu Formation at Chikubetsu River, Tommae-gun, north-western Hokkaido, Japan. *Bulletin of Gunma Museum of Natural History*, 18, 69–76.

### Non-Peer Reviewed or Preprint

17. **Kumiko Matsui** (2023) A new program of the hands-on research activity workshop using mammalian teeth. *The Bulletin of the Hobetsu Museum*, 38, 1–10.
18. **Kumiko Matsui**, Ana M. Valenzuela-Toro, Nicholas D. Pyenson (2022) New data from the first discovered paleoparadoxiid (Desmostylia) specimen shed light into the morphological variation of the genus *Neoparadoxia*, *Research Square*, DOI: 10.21203/rs.3.rs-1094164/v2
19. **Kumiko Matsui** and Yuri Kimura (2022) Museum exhibitions of fossils into commercial products: Unexpected outflow of 3D models due to unwritten image policies *Museum exhibitions of fossils into commercial products: Unexpected outflow of 3D models due to unwritten image policies*. *EarthArxiv*, DOI: 10.31223/X5ZW5Z
20. **Kumiko Matsui** and Yuri Kimura (2021) Independent Acquisition of Carnassial Teeth in Fishes and Mammals. *Research Square*, DOI: 10.21203/rs.3.rs-1094239/v1
21. **Kumiko Matsui** and Tomoki Karasawa (2020) Touch national monument: web-based AR application of *Taniwhasaurus mikasaensis*. *ESSOAr*, doi.org/10.1002/essoar.10504144.1
22. **Kumiko Matsui** (in press) New technology reduces the distance between museum specimens and the public. *Bulletin of Mikasa City Museum*.

### Book

1. Tomoki Karasawa, **Kumiko Matsui**. 2021. Let's touch our national treasure!-Yezo Mikasa Ryu (*Taniwhasaurus mikasaensis*) observation kit by using AR-. Digital booklet of Hakubutsu-Fes.
2. **Kumiko Matsui** (translation), 2015. Mega Dinosaurs special exhibition 2015 –exploring the mystery of gigantism–. The official guidebook. pp. 50-51, The Yomiuri Shinbun.
3. Kazunari Aoki, Ritsuko Ohira, Shintaro Ogino, Takashi Oda, Tatsuya Kaede, Seiichi Kihira, Mitsuo Kuwayama, Takahisa Goda, Naoki Kohno, Nobuaki Kobayashi, Akimasa Shibagaki, Tatsuya Shinmura, Miyuki Takagi, Yuji Takakuwa, Hitomi Terasaki, Hirokazu Tokugawa,

Hutoshi Nakaueno, Yuichiro Nishioka, **Kumiko Matsui**, Shunichi Miyamoto, Koji Yamamoto, Motohumi Watanabe (In Japanese alphabet order ). 2012. The 76th Mizunami City Fossil Museum Special Exhibition “Mizunami that Desmostylus saw-fossils from Mizunami Group-”. Booklet of the 76th special exhibition, pp. 8. Mizunami City Fossil Museum.

## **Presentations**

### **(In English)**

1. **Kumiko Matsui**, Yuri Kimura (2022) “Outbreak”: Walking with a smartphone or camera sets a new risk for the museums. GSA Connects 2022. Denver, Colorado, USA.
2. **Kumiko Matsui**, Nicholas D. Pyenson, Takanobu Tsuihiji, Hiroshi Sawamura, Tatsuro Ando (2022) Fossil Baleen whales (Mysticeti) show that cerebrum size achieved modern size before baleen evolved. GSA Connects 2022. Denver, Colorado, USA.
3. Tomoki Karasawa, **Kumiko Matsui**, Akihiro Misaki, Shigehiro Uchida (2022) The same Pathological deformation patterns were recognized in Japanese ammonoids from different age and different taxa. GSA Connects 2022. Denver, Colorado, USA.
4. **Kumiko Matsui**, Yuri Kimura (2022) Museums at risk by leaving 3D image policies unwritten. AVICOM in ICOM 2022. Prague, Czech Republic.
5. **Kumiko Matsui**. 2021. Are internal structures preserved in vertebrates’ fossils useful for finite element analyses? – a pilot analysis using multiple preservation fossils-. MECHANICAL FINDER User Meeting 2021.
6. **Kumiko Matsui** and Yuri Kimura. 2021. Mammalian-like tooth replacement in a Pycnodont fish jaw. The Society of Vertebrate Paleontology 81st Annual Meeting Virtual 2021.
7. **Kumiko Matsui** and Tohru Kobayashi. 2021. The digital cranial endocast of *Dusisiren dewana*: the implication for paleoecological changes of hydrodamalinae. The 9th SECAD. Online.
8. **Kumiko Matsui** and Tohru Kobayashi. 2020. The first digital cranial endocast of an ancestor of Steller’s sea cow. The Palaeontological Association 64th Annual Meeting. Online.
9. **Kumiko Matsui**. 2020. Spatial and temporal distribution of Desmostylia (Mammalia) and Desmostyliian evolution related to other marine mammals. GSA 2020 Connects Online.
10. **Kumiko Matsui**. 2020. Touching the Japanese national “treasure”: utilization of multimedia-based visual contents of Japan’s national monument, the holotype of *Taniwhasaurus mikasaensis* (Squamata: Mosasauria). GSA 2020 Connects Online.
11. Tomoki Karassawa, **Kumiko Matsui**, Haruyoshi Maeda, Toshiaki Osanai. (2020). Disease never comes singly: a pathological case study on a Cretaceous ammonoid *Menuites japonicus* (Ammonitida, Pachydiscidae) from Hokkaido, Japan. GSA 2020 Connects Online.
12. Ryuichiro Hataya, **Kumiko Matsui** and Tomoki Karasawa. (2020). Learning to identify large fossils using deep conventional neural networks. GSA 2020 Connects Online.

13. **Kumiko Matsui** and Tomoki Karasawa. (2020). Interacting with the untouchable: utilizing ultimedia-based visual contents for the Japanese national monument, the *Taniwhasaurus mikasaensis* (Mosasauridae). The Society of Vertebrate Paleontology 80th Annual Meeting · Virtual 2020.
14. **Kumiko Matsui** and Tomoki Karasawa. (2020). Touch national monument: web-based AR application of *Taniwhasaurus mikasaensis*. JpGU – AGU Joint Meeting 2020: Virtual.
15. Ryuichiro Hataya, **Kumiko Matsui** and Tomoki Karasawa. (2020). From artisanship to amateur: the challenge to identify large fossils using deep learning. JpGU – AGU Joint Meeting 2020: Virtual.
16. **Kumiko Matsui** and Brian Lee Beatty. 2019. Juvenile specimen reveals unexpected dental morphology of early Desmostylians. 11th North American Paleontological Conference, Riverside, USA. (invited)
17. **Kumiko Matsui**, Soichiro Kawabe, Hideki Endo, Takanobu Tsuihiji, Naoki Kohno. 2019. Inference on aquatic adaptation of fossil mammals based on cranial characteristics with an example of the enigmatic fossil clade Desmostylia (?Afrotheria: Mammalia). 11th North American Paleontological Conference, Riverside, USA.
18. **Kumiko Matsui**, Yuri Kimura, Mitsuhiro Nagata, Hiroaki Inose, Kazuya Ikeda, Brian Lee Beatty, Takafumi Hirata, Tatsuya Shinmura, Sachiko Agematsu, and Katsuo Sashida. 2018. The Sleeping Beauty: a desmostylian fossil re-discovered from the geological collections at University of Tsukuba. the 78th Annual Meeting of the Society of Vertebrate Paleontology, Albuquerque, USA.
19. **Kumiko Matsui**, Katsuo Sashida, Sachiko Agematsu, and Naoki Kohno. 2018. Bounded by depth: The marine habitat of the enigmatic Miocene fossil mammals *Desmostylus* and *Paleoparadoxia*. the 5th International Palaeontological Congress, Paris, France.
20. **Kumiko Matsui**. 2017. Quantitative analysis of aquatic adaptation in Desmostylia (Mammalia: ?Afrotheria) based on cranial characteristics. SVP 2017 Alfred Sherwood Romer Prize Session. the 77th Annual Meeting of the Society of Vertebrate Paleontology, Calgary, Canada.
21. **Kumiko Matsui** and Masamichi Ara. 2017. Spatial and temporal distribution of Desmostylia (Mammalia) and implications on its evolution and extinction. JpGU–AGU Joint Meeting 2017, Chiba, Japan.
22. **Kumiko Matsui**. 2016. Re examination of Desmostylian phylogenetic relationships. Edwin H. and Margaret M. Colbert Prize competition posters. the 76th Annual Meeting of the Society of Vertebrate Paleontology, Salt Lake City, USA.
23. **Kumiko Matsui**, Soichiro Kawabe, Hideki Endo, Sara Kobayashi, and Takanobu Tsuihiji. 2015. Quantitative analysis of aquatic adaption in olfactory and optic characters in the skull of Carnivora. the 75th Annual Meeting of the Society of Vertebrate Paleontology, Dallas, USA.
24. **Kumiko Matsui**. 2015. Reexamination of Desmostylian Phylogenetic Relationship. the Vth International Wildlife Management Congress, Sapporo, Japan.

25. **Kumiko Matsui** and Soichiro Kawabe. 2014. The oldest record of *Paleoparadoxia* from the Northwest Pacific and its implication on the early evolution of Paleoparadoxiinae (Mammalia: Desmostylia). the 74th Annual Meeting of the Society of Vertebrate Paleontology, Berlin, Germany.
26. **Kumiko Matsui**, Katsuo Sashida, and Sachiko Agematsu. 2012. The difference of stratigraphic occurrence *Desmostylus* (extinct marine mammal, Desmostylidae; Deamostylia) and *Paleoparadoxia* (extinct marine mammal, Paleoparadoxidae; Deamostylia). Second International Symposium on East Asian Vertebrate Species Diversity, Kyoto, Japan.

### **Presentation (in Japanese)**

1. Tomoki Karasawa, Akihiro Misaki, **Kumiko Matsui** (2023) A specimen of *Menabites* (Collignoniceratidae, Ammonitida) with pathological deformations found from the Campanian Toyajo Formation, Wakayama Prefecture, Japan. The 172nd Regular Meeting, the Palaeontological Society of Japan.
2. Yuichi Fukushima, Sachiko Agematsu, **Kumiko Matsui**, Kaneyoshi Fujiwara, Teruyuki Maruoka (2022) Reexamination of *Neostrachanognathus* feeding organ reconstruction based on natural conodont assemblages from Olenekian (Late Early Triassic) whetstone-type siliceous claystone in the Itsuki area, Kumamoto Prefecture, Japan. The 129th Annual Meeting of the Geological Society of Japan, Tokyo, Japan.
3. **Kumiko Matsui**, Nicholas D. Pyenson, Kohta Shimazoe, Tomoyuki Ohashi (2022) Mammalian fossils from Senjo-jiki, Wakamatsu, Kitakyushu, Japan. The 2022 Annual Meeting, the Palaeontological Society of Japan. Online
4. Kimura Yuri, **Kumiko Matsui** (2022) Walking with a smartphone makes new risks: unwritten photo policies in museums cause an unexpected outbreak. The 2022 Annual Meeting, the Palaeontological Society of Japan. Online
5. **Kumiko Matsui**, Nicholas D. Pyenson. 2022. "Newly" discovered desmostylians from Unalaska, Alaska, USA. The 171st Regular Meeting, the Palaeontological Society of Japan.
6. **Kumiko Matsui**. 2021. Neuro-sensory evolution of Mysticeti (Cetacea). JURC-DES Annual Meeting 2021, Online.
7. **Kumiko Matsui**, Yuri Kimura. 2021. A "mammalian" fossil from the Upper Paleocene of the Ouled Abdoun Basin in Morocco. The 170th Regular Meeting, the Palaeontological Society of Japan.
8. Tomoki Karasawa, **Kumiko Matsui**, Haruyoshi Maeda, Shigehiro Uchida. 2021. Multiple shell-forming failure in an ornamented ammonoid, "*Yubariceras*" sp. (Ammonitida, Acanthoceratidae) found from the Cretaceous Yezo Group, Hokkaido, Japan. The 170th Regular Meeting, the Palaeontological Society of Japan.
9. **Kumiko Matsui**, Tomoki Karasawa. 2020. AR-based hands-on for a national monument Yezomikasa-ryu fossil (*Taniwhasaurus mikasensis*). The 74th Japan Society of Earth Science Education annual meeting.



10. **Kumiko Matsui**, Brian L. Beatty, Hiroshi Sawamura, Tatsuro Ando, Takanobu Tsuihiji. 2020. Sensory evolution and ecology of Desmostylia based on digital cranial endocasts of Desmostylidae. The 169th Regular Meeting, the Palaeontological Society of Japan. Komaba, Tokyo, Japan.
11. **Kumiko Matsui**, Tomoki Karasawa. 2020. Touching unattachable: introduction of National Monument's AR Web application. The 169th Regular Meeting, the Palaeontological Society of Japan. Komaba, Tokyo, Japan.
12. Tomoki Karawasa, **Kumiko Matsui**, Haruyoshi Maeda, Toshiaki Osanai. 2020. Disease never come singly: pathological case study on a Cretaceous ammonoid *Menuites japonicus* from Hokkaido, Japan. The 169th Regular Meeting, the Palaeontological Society of Japan. Komaba, Tokyo, Japan.
13. **Kumiko Matsui**, Brian L. Beatty. 2019. "The baby" tells us unexpected diversity and evolution of Desmostylia (Mammalia). The 126th Annual Meeting of the Geological Society of Japan, Yamaguchi, Japan.
14. Yuri Kimura, **Kumiko Matsui**, Mitsuhiro Nagata, Hiroaki Inose, Kazuya Ikeda, Brian L. Beatty, Hideyuki Ohbayashi, Takeshi Hirata, Shigeru Ohto, Tatsuya Shinmura, Sachiko Agematsu, Katsuo Sashida. 2018. The Sleeping Beauty Part 1: a desmostylian fossil re-discovered from the geological collections at University of Tsukuba. The 2018 Annual Meeting, the Palaeontological Society of Japan 2018, Sendai, Miyagi, Japan.
15. **Kumiko Matsui**. 2018. Can we identify Desmostylia based on only humeral morphology? JpGU meeting 2018, Chiba, Japan.
16. **Kumiko Matsui**, Rachel Ann Racicot, Jorge Veletz-Juarbe, Taka Tsuihiji, Naoki Kohno. 2018. Strange ear: inner ear morphology tells acoustic adaptation in Desmostylia. The 167th Regular Meeting, the Palaeontological Society of Japan. Matsuyama, Ehime, Japan.
17. **Kumiko Matsui**, Masamichi Ara. 2017. Paleogeography of Desmostylia (Mammalia: ?Afrotheria) and its implication for evolution and extinction of Desmostylia. The 2017 Annual Meeting, the Palaeontological Society of Japan. Kitakyushu, Fukuoka, Japan.
18. **Kumiko Matsui**, Soichiro Kawabe, Hideki Endo, Takanobu Tsuihiji, Naoki Kohno. 2017. Quantative analysis of aquatic adaptation of Desmostylia (Mammalia: ?Afrotheria) based on cranial characteristics. The 2017 Annual Meeting, the Palaeontological Society of Japan. Kitakyushu, Fukuoka, Japan.
19. **Kumiko Matsui**, Masamichi Ara. 2016. Spatial and Temporal Distribution of Desmostylia (Mammalia). The 123rd Annual Meeting of the Geological Society of Japan, Tokyo, Japan.
20. **Kumiko Matsui** 2016. Reexamination of desmostylian phylogenetic relationship. The 2016 Annual Meeting, the Palaeontological Society of Japan. Fukui, Japan.
21. **Kumiko Matsui**. 2015. Desmostylian phylogenetic relationship revisited. JpGU meeting 2015, Chiba, Japan.

22. **Kumiko Matsui**. 2015. Comparative Morphology of desmostylids humeri—How can we reliably identify by using humeri—The 2015 Annual Meeting, the Palaeontological Society of Japan. Tsukuba, Ibaraki, Japan.
23. **Kumiko Matsui**, Soichiro Kawabe. 2014. The timing of geographical expansion of Paleoparadoxiine (Mammalia: Desmostylidae) to northwestern Pacific with an implication on the early evolution. The 2014 Annual Meeting, the Palaeontological Society of Japan. Fukuoka, Japan.
24. **Kumiko Matsui**, Katsuo Sashida, Sachiko Agematsu, Naoki Kohno. 2014. Habitat strategies of Japanese *Desmostylus* and *Paleoparadoxia* based on their semimetal environments. The 61st Annual Meeting of the Ecological Society of Japan. Hiroshima, Japan.
25. **Kumiko Matsui**, Soichiro Kawabe. 2013. A new desmostylid from Haboro area, Hokkaido. The 163rd Regular Meeting, the Palaeontological Society of Japan. Yokohama, Kanagawa, Japan.
26. **Kumiko Matsui**, Katsuo Sashida, Sachiko Agematsu. 2012. A consideration on the inhabiting depth of Japanese Desmostylia. The 162nd Regular Meeting, the Palaeontological Society of Japan. Tomioka, Gunma, Japan.
27. **Kumiko Matsui**, Katsuo Sashida, Sachiko Agematsu. 2011. Early Cretaceous radiolarians from the middle Miocene Nagura Formation sandstone, Chichibumachi Group. The 11st Radiolarian Symposium. Matsuyama, Ehime, Japan.

### Public Talks or Seminars

1. **Kumiko Matsui**. “*Paleoparadoxia* is full of mysteries!” Tsuchiyu Elementary School and The Tsuchiyu Onsen Tourism Association, Fukushima, Japan. March 2019.
2. **Kumiko Matsui**. “Hippo like Rhino ancestors? Mysterious extinct mammal, Desmostylia”, equimonia, Kobe, Japan. December 2nd, 2018.
3. **Kumiko Matsui**, Soichiro Kawabe. “New discovery of rewrite Desmostylian evolutionary history”, RIHN seminar, The Research Institute for Humanity and Nature, Kyoto, Japan. June, 2015.
4. **Kumiko Matsui**. “New discovery of rewrite evolutionary history of the extinct rare animal, Desmostylia!”. Museum lecture for grown-ups. Gifu Prefectural Museum, Seki, Gifu, Japan. March 22nd, 2015.
5. **Kumiko Matsui**. “Predictable Analysis for extant skulls of sirenians and pinnipeds and future works”. Vertebrate Morphology seminar 2014. National Museum of Nature and Science, Tsukuba, Ibaraki, Japan. February 2015.
6. **Kumiko Matsui**. “The Phantom beast, Desmostylia and Japanese marine fossils”. Thinking about the East Asia of Natural History. Kyushu University, Fukuoka, Japan. October 2013.

## Online events

1. Special Lecture Series of Stars Academy  
“Let's Restore the Ancient Ocean Together!” (August 21st and September 19th, 2022)
2. “WONDER DOORS” Mandala of the Earth ★ Wonders  
Life travelogue of Tsushima Cat  
VR museum guide (February 26th, 10 a.m./1 p.m JST))
3. “WONDER DOORS” Mandala of the Earth ★ Wonders  
Life travelogue of Tsushima Cat (*Prionailurus bengalensis euptilurus*): the origin of their life  
(December 25th, 2021 JST)
4. Dokodemo Hakubutsu Festival!  
Take the national treasure in your “hand”! –AR experience with the holotype specimen of  
*Taniwhasaurus mikasaensis* (Mosasauridae)– (February 7th, 2021)

## Industry cooperation

From April 2021 CommuniCARE Co.Ltd.

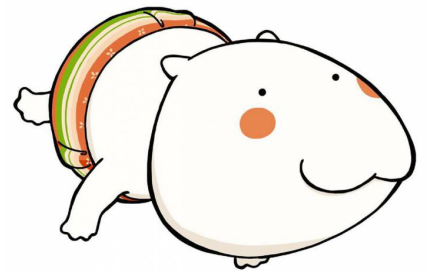
Supervision of SDGs and Endangered species protection Video program  
“WONDER DOORS”

Life Travelogue of Tsushima Cat (*Prionailurus bengalensis euptilurus*): Synboisis of Animals and Humans

March 2019 Tsuchiyu Onsen Tourism Association for Regional Development Promotion

Supervision of “Yu-Pacchi”

Yu-Pacchi: Yu-Pacchi’s motif is an extinct marine mammal, *Paleoparadoxia* (Desmostylia). In Tsuchiyu Onsen, a “skeleton” of *Paleoparadoxia* was found in the 1950s. From the discoverer, this *Paleoparadoxia* originally had a lot of skeletal elements, but almost all materials were lost by the fire disaster. Fortunately, a femur of *Paleoparadoxia* was taken out of Tsuchiyu Onsen, and it escaped burning. In 2017, this specimen was re-discovered from the geological collection of the University of Tsukuba and reported in Matsui et al. 2018.



## Museum works

1. Museum exhibition supervisory (July–October 2022)  
The Mikasa City Museum’s Special Exhibition for 2022  
“Wing~evolution of flying tetrapods, pterosaur and birds~”
2. Museum exhibition supervisory (July–October 2019)  
The Mikasa City Museum’s Special Exhibition for 2019  
“MARITIME! Reptiles and mammals in the sea”
3. Museum exhibit creation and guide (May, 2019)  
“Museum week” at Kyushu Univerity Museum, Fukuoka, Japan (May, 2019)
4. Museum guide of behind the scene (April, 2017)  
Open Lab 2017 at the National Museum of Nature and Science, Japan

5. Museum exhibit creation and lecture (August, 2013)  
Science Square 2013 at the National Museum of Nature and Science, Japan
6. Museum exhibit creation and guide (May, 2013)  
Geology Day Special Event “the Earth tells 2013” at Kyoto University Museum
7. Museum exhibit creation and lecture (August, 2013)  
Science Square 2012 at the National Museum of Nature and Science, Japan
8. Museum exhibit creation and guide (August, 2012)  
“Come, See, Touch!: Kyoto University's Marine Mammal Research Exhibition” at Kyoto University Museum
9. Provide a research panel for the museum exhibit (June to November, 2012)  
The 76th Mizunami City Fossil Museum Special Exhibition “Mizunami that Desmostylus saw-fossils from Mizunami Group- at Mizunami Fossil Museum
10. Museum exhibit creation and guide (May, 2012)  
Geology Day Special Event “the Earth tells 2012” at Kyoto University Museum

### **Conference management assistance**

1. Japan Geoscience Union (2015–2017)
2. Paleontological Society of Japan (2014)
3. APRU Research Symposium on University Museums: Forming a University Museum Collection Network As the Core of Frontier Research (2012 at Kyoto University)

### **Journal Reviews**

Paleontological Research (2018- 2020)