Yuta SHIINO, Ph.D.

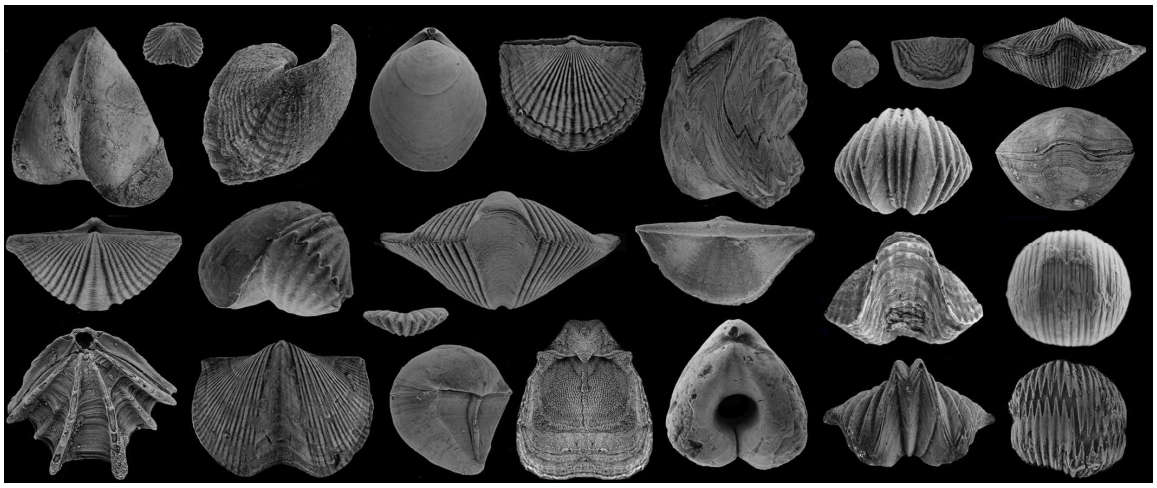
Associate Professor
Program: Environmental Science and Technology
Area: Earth Science
Undergraduate: Dept. of Geology

Professional Expertise

Functional morphology, biomechanics and evolutionary morphology in fossil organisms.

Research Fields of Interest

1. Form and function of brachiopod shells.
2. Autecology of living brachiopods.
3. Swimming capability of trilobites.
4. Palaeoecology of fusulines.
5. Geologic history and its related fauna of the Late Palaeozoic in Japan.
6. Late Ordovician event with special reference to brachiopod evolution and extinction.



Fossil brachiopods. Much of bizarre shell forms have evolved and been extinct.

Education

2009: Ph.D. in Geology, Graduate School of Science, The University of Tokyo, Japan
2006: M.S. in Geology, Graduate School of Science and Technology, Shizuoka University, Japan
2004: B.S. in Geology, Graduate School of Science, Shizuoka University, Japan

Professional Societies and Activities

1. The Palaeontological Society of Japan
2. The Geological Society of Japan
3. Japanese Association of Benthology
4. Japan Geoscience Union
5. The Japan Society of Mechanical Engineers
6. The Society for Science on Form

Awards

1. Excellent Poster Award (The Palaeontological Society of Japan, 2016)
2. Excellent Poster Award (The Geological Society of Japan, 2013)
3. Excellent Poster Award (The Palaeontological Society of Japan, 2013)
4. Excellent Poster Award (The Palaeontological Society of Japan, 2011)
5. The Award of the Alwyn Williams Fund (The 6th International Brachiopod Congress, 2010)
6. Excellent Paper Award (The Palaeontological Society of Japan, 2009)

Major Publications

Papers

[1] Shiino, Y., Kuwazuru, O., Suzuki, Y., Ono, S. and Masuda, C., "Pelagic or benthic? Mode of life of the remopleuridid trilobite *Hypodicranotus striatulus*", *Bulletin of Geosciences*, vol.89, no.2, pp.207-218, 2014.

[2] Shiino, Y. and Angiolini, L., "Hydrodynamic advantages in the free-living spiriferinide brachiopod *Pachycyrtella omanensis*: functional insight into adaptation to high energy flow environment", *Lethaia*, vol.47, no.2, pp.216-228, 2014.

[3] Shiino, Y. and Kitazawa, K., "Stealth effect of red shell in *Laqueus rubellus* (Brachiopoda, Terebratulida) on the sea bottom: An evolutionary insight into the prey-predator interaction", *ISRN Zoology*, vol.2012, article ID 692517, pp.1-7, 2012.

[4] Shiino, Y., Kuwazuru, O., Suzuki, Y. and Ono, S., "Swimming capability of the remopleuridid trilobite *Hypodicranotus striatus*: Hydrodynamic functions of the exoskeleton and the long, forked hypostome", *Journal of Theoretical Biology*, vol.300, pp.29-38, 2012.

[5] Shiino, Y., Yamada, S., Suzuki, Y. and Suzuki, C., "Ptycholophous lophophore in a productidine brachiopod", *Paleontological Research*, vol.15, no.4, pp.233-239, 2011.

[6] Shiino, Y. and Kuwazuru, O., "Comparative experimental and simulation study on passive feeding flow generation in *Cyrtospirifer*" *Memoirs of the Association of Australasian Palaeontologists*, no.41, pp.1-8, 2011.

[7] Shiino, Y. and Suzuki, Y., "The ideal hydrodynamic form of the concavo-convex productide brachiopod shell", *Lethaia*, vol.44, no.3, pp.329-343, 2011.

[8] Shiino, Y., Suzuki, Y. and Kobayashi, F., "Sedimentary history with biotic reaction in the Middle Permian shelly sequence of the Southern Kitakami Massif, Japan", *Island Arc*, vol.20, no.2, pp.203-220, 2011.

[9] Shiino, Y. and Kuwazuru, O., "Theoretical approach to the functional optimisation of spiriferide brachiopod shell: Optimum morphology of sulcus", *Journal of Theoretical Biology*, vol.276, pp.192-198, 2011.

[10] Shiino, Y. and Kuwazuru, O., "Functional adaptation of spiriferide brachiopod morphology", *Journal of Evolutionary Biology*, vol.23, no.7, pp.1547-1557, 2010.

[11] Shiino, Y., "Passive feeding in spiriferide brachiopods: an experimental approach using models of Devonian *Paraspirifer* and *Cyrtospirifer*" *Lethaia*, vol.43, no.2, pp.223-231, 2010.

[12] Suzuki, Y., Shiino, Y. and Bergström, J., "Stratigraphy, carbonate facies and trilobite associations in the Hirnantian part of the Boda Limestone, Sweden", *GFF*, vol.131, no.4, pp.299-310, 2009.

[13] Shiino, Y., "Middle Permian echinoconchoide brachiopod *Vediproductus* in the Kamiyasse area, Southern Kitakami Mountain, northeast Japan", *Paleontological Research*, vol.13, no.3, pp.251-258, 2009.

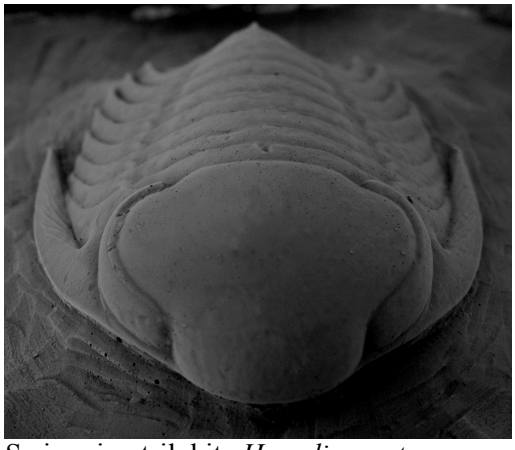
[14] Shiino, Y., Kuwazuru, O. and Yoshikawa, N., "Computational fluid dynamics simulations on a Devonian spiriferid *Paraspirifer bownockeri* (Brachiopoda): Generating mechanism of passive feeding flows", *Journal of Theoretical Biology*, vol.259, pp.132-141, 2009.

[15] Kobayashi, F., Shiino, Y., and Suzuki, Y., "Middle Permian (Midian) foraminifers of the Kamiyasse Formation in the Southern Kitakami Terrane, NE Japan", *Paleontological Research*, vol.13, no.4, pp.79-99, 2009.

[16] Shiino, Y. and Suzuki, Y., "Articulatory and musculatory systems in a Permian concavo-convex brachiopod *Waagenoconcha imperfecta* Prendergast, 1935 (Productida, Brachiopoda)", *Paleontological Research*, vol.11, no.3, pp.265-275, 2007.

Books

[1] Shiino, Y. 2013. *The Mystery of Concavo-Convex Shell; Exploring Fossil Brachiopods*, Tokai University Press. (in Japanese)



Swimming trilobite *Hypodicranotus*.

Brachiopod *Spiriferina* with spiralia.