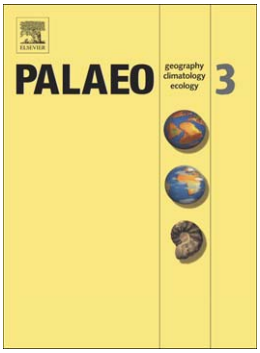

Mechanism and process of construction of tubes of the trace fossil *Schaubcylindrichnus coronus* Frey and Howard, 1981

Kazuki Kikuchi, Nobuhiro Kotake, Noboru Furukawa

PII: S0031-0182(15)00669-0
DOI: doi: 10.1016/j.palaeo.2015.11.013
Reference: PALAEO 7565

To appear in: *Palaeogeography, Palaeoclimatology, Palaeoecology*

Received date: 21 August 2015
Revised date: 13 November 2015
Accepted date: 17 November 2015

Please cite this article as: Kikuchi, Kazuki, Kotake, Nobuhiro, Furukawa, Noboru, Mechanism and process of construction of tubes of the trace fossil *Schaubcylindrichnus coronus* Frey and Howard, 1981, *Palaeogeography, Palaeoclimatology, Palaeoecology* (2015), doi: 10.1016/j.palaeo.2015.11.013

Title: Mechanism and process of construction of tubes of the trace fossil *Schaubcylindrichnus coronus* Frey and Howard, 1981

Authors: Kazuki Kikuchi, Nobuhiro Kotake, Noboru Furukawa

Affiliation: Department of Earth Science, Chiba University, Chiba, 263-8522 Japan

Corresponding author:

Kazuki Kikuchi

Phone: +81-43-290-2836

E-mail: adta3128@chiba-u.jp

Abstract

Schaubcylindrichnus coronus is a common trace fossil occurring in post-Cretaceous shallow marine deposits. It consists of a sheaf or bundle of thickly lined tubes, with the tube linings usually composed of colorless minerals ("mineral-lined" type). Recently, many peculiar specimens of *S. coronus*, whose tube linings are composed mainly of tests of the larger benthic foraminifer *Operculina complanata japonica* ("*Operculina*-lined" type), have been found in the inner shelf deposits of the late Miocene Kaichigo Formation in the Miyazaki Group, southwestern Japan. The "*Operculina*-lined" specimens occur in association with funnel-shaped concentrations of *Operculina* tests. In some specimens, the end of the tube directly connects to the concentration. We consider these concentrations to be the product of feeding funnels filled with *Operculina* tests that were delivered from shallower marine settings in