


Slater, et al., 2018, Widespread preservation of small carbonaceous fossils (SCFs) in the early Cambrian of north Greenland: *Geology*, <https://doi.org/10.1130/G39788.1>.

MATERIALS AND METHODS

For each sample, 50 g of shale were washed with distilled water before subsequent immersion in 40% conc. HF acid for five days. Remaining residues were neutralized and processed through 20 μm and 50 μm sieves. Fossil material was picked from suspension using a pipette and transferred to glass microscope slides. Final images of fossils studied using transmitted light microscopy were compiled from digital photographs at multiple focal planes.

Supplementary Figure DR1. Idealized log of Buen Formation type locality at south side of Buen, southern Peary Land, showing equivalent sampled intervals at Sæterdal (SA) and Brillesø (BR) sections (red lines). Sediments housing the Sirius Passet *Lagerstätte* in northern parts of the Buen Formation are considered to represent the outboard equivalent of the coarse sandstones in the lower part of the southern succession (below ~270 meters). A total of 41 samples were processed which targeted finer lithologies, avoiding coarse sandstones. All samples from Sæterdal and Brillesø sections yielded SCFs. Seven processed samples from the Sirius Passet *Lagerstätten* contained only black amorphous organic matter. 10 samples from ~330–410 meters (BR), 13 samples from ~285–310 meters (BR), 11 samples from ~60–100 meters (SA). The most productive samples were sourced from mudstones ~285–310 meters at Brillesø (considered to be uppermost Stage 3). Log after fig. 15 of Ineson and Peel 1997.



SA BR

