

## Characteristics in the distribution of diatom frustules in a tidal area of lower reach of Obitsu river

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Diatom samples were collected from a tidal area of lower reach of Obitsu river, central Japan in May 2005, November 2006 and February 2007. The purpose is to reveal the behavior of diatom frustules (dead cells) transported by a water current and their depositional processes, and to obtain characteristics in the distribution and taxonomic changes of diatom frustules. Hematoxylin and Eosin stain is used in this study to distinguish between living and dead cells of diatoms in present environment.

The results are as follow;

1. In Tidal flat(sandy), diatom frustules are transported from a tidal flat(foreshore) to a tidal creek by a tidal current and deposit on the tidal creek.
2. In Tidal creek(south:muddy sand and north:muddy), diatom frustules are not transported from a tidal creek to another area by a water current and stay in this area.
3. In Estuary(sandy), diatom frustules are widely transported from a estuary to another area by a water current and tidal current, but deposit on this area.
4. In Lower reach(muddy sand), diatom frustules are transported from a lower reach of Obitsu river to much lower area by a water current and deposit on a tidal creek(south) by a tidal current.
5. In the whole tidal area of Obitsu river, there is a tendency the number of diatom frustules is larger as the grain size of bottom materials is finer.