

# Channel migration in the middle Tama River, central Japan, affected by Typhoon 1919 estimated from the sedimentological characteristics

\*Takako UTSUGAWA<sup>1</sup>, Masaaki Shirai<sup>2</sup>

1. Department of Geography, Faculty of Geo-Environmental Sciences, Rissho University, 2. Department of Geography, Tokyo Metropolitan University

The channel migration process in the middle Tama River, central Japan, affected to the Typhoon 1919 occurred on October 12, 2019 was revealed from the observed sedimentological features. The reformation of gravel bar in river accompanying with the changing river channel due to swelling torrent affected by a storm such as a typhoon is well known. While the regional and consecutive report is indispensable as Sakamoto (2015) and Shimazu (2018, 2019).

The Tama River originates in Mt. Kasatoriyama (1,953 m a.s.l.) in the Kanto mountainous region, central Japan, flows into the Kanto Plain at Ome City, Tokyo Metropolis, and runs along the southwestern side of Musashino Upland to Tokyo Bay. This river is a meandering river having alternating bars from the upstream reaches. We researched the location of bars utilizing GPS survey to compare the topography before the swollen and the gravel size distribution on several bars from Ome to Tachikawa Cities, Tokyo Metropolis (18 km in long) in the middle Tama River. Characteristic bedforms on gravel bar, imbrication of gravels, and partially the aerial photography provided by Geospatial Information Authority of Japan are useful to discuss the channel migration process in the swollen occurred on October 12, 2019. The basement of the Tama River, Kazusa Group (ca. 2.5-1.6 Ma) mainly composed of mudstone was exposed especially in downstream of the surveyed area, and deeply eroded in the direction across the usual stream. This direction of erosion and the scour observed on the surface of basement were also helpful to discuss. Many sands to boulders transported as swept away the vegetation usually formed many bedforms having obviously imbrication on the water high level zone in the Tama River. At the 2.2 km downstream site from an intake weir, a conspicuous quantity of boulders probably deposited on the bottom of river may have redeposited on the surface of bars by the swollen. And the gravel bars around the trees (3 to 5 m in high) grew on the water high level zone as well as the bridge piers were significantly scoured by the swollen.

## References

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