

# The change of depositional system of the alluvium by the event sedimentation

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In the formation process of the alluvium, it has been indicated that eustatic change of sea level, the sedimentation by tectonic subsidence and sedimentation rate are generally important. The Niigata plain is a typical plain with coastal sand dune, which represents the Sea of Japan side. In the transition of the sedimentation system of the Niigata plain, the 3-4 time of relative eustatic change of sea level is recorded after the Jomon transgression. In the subsiding region, barrier system formed with the Jomon transgression at the initial stage develops on the sedimentation system. In the region with the small subsidence, the barrier system changes to the delta system, and the plain is filled. However, the barrier system coexists with the delta system in the equal alluvial plain about 5ka. The factors in which the system changes are necessary for changing in the delta system. In Numazawa volcano in the mid Tadami River region of Fukushima Prefecture, there was the pyroclastic flow eruption about 4700 years ago. The pyroclastic flow temporarily stopped Tadami River, and collapse was generated. Over about 100km, this flood flowed in respect of Tadami River and Agano River. Though this flood flow sediment is recorded on the river terrace to the near plain, in the plain area, it has been filled. It is estimated that the enormous pyroclastic sediments by this flood affected not only rapid advance of delta system of the Agano River region but also advance of the whole barrier system development. The relationship between enormous pyroclastic sediments by the Numazawa volcano and delta system, which develops in the eastern region in Niigata City, was examined. The pyroclastic sediment (the removability sediment) is recorded as sediment of the terrace (Rokunose area of the Agano City) in the boundary region between plain and hill. The facies here was the HCF sediment of fine-grained-distal facies, and the relative elevation from recent river was about 4-5m. In Agano River watershed in the Niitsu City, it was able to be confirmed by the boring sample in the about 5-9m horizon under the surface. In the east in Niigata City, the pumice originated the Numazawa volcano is included in the sand layer of fluvial facies observed in the about 15(13)-20m horizon under the surface. In the sample of the east in Niigata City, though the thick sand layer where HCF sediment and pyroclast concentrated could not have been confirmed, it was able to be confirmed to be a sand layer which this horizon received the effect of the pyroclast of the Numazawa volcano origin by judging from features of heavy mineral composition of sand layer. Therefore, there is the relation on the delta and the huge supply of pyroclasts. Relative eustatic change of sea level has greatly and often estimated the element of the deposition with glacial eustatic change of sea level for the formation of the stratum. Though the supply of the sediment is also large element, it is a difficult problem to concretely estimate the effect. The effect of the large-scale sedimentation on the formation of the plain becomes an index even in the case in which the relationship between sedimentation and formation of the alluvium. This problem is the examination, which can also greatly contribute to evaluation and prediction of the sediment discharge disaster of plain area by the large-scale reworked sedimentation of the pyroclasts.