

Channel form and deposits in the Sato-gawa River in Ibaraki Prefecture

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The Sato-gawa River, 49.1 km in length, is the longest tributary of the Kuji-gawa River system in Ibaraki Prefecture. The channel is controlled by the Tanakura fault zone. The river flows in the mountainous area of upstream and has alternating bars on the alluvial plain in the area of downstream. Generally long profiles of river channels and river valleys are considered to be concave upwards. However, the long profile of the Sato-gawa River is not concave upwards. The river bed deposits consist of boulders and gravels of granites and crystalline schists with Miocene sedimentary rocks. They are characterized by abrupt decrease of the number of boulders, no successive decrease in the maximum diameter of boulders, and the low grade of roundness in general. As the basement rocks are often exposed in the river bed, it is considered that the river has not much sediment. On the whole, the Sato-gawa River shows characteristic features of bedrock-control type.