This thesis studies surface microfeatures of fluvial quartz grains. The genesis of specific surface microfeatures is influenced by specific physical-geographic conditions prevailing in the environment. Fluvial environment gives a various sets of microfeatures according to kinetic energy of the stream. For the purposes of exoscopy grains of upper reaches (Klínový potok), middle parts of streams (Volyňka, Labe) and downstream (Vltava, Knovízský potok) were used and compared with results of other researchers.