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**S6\_22 The ecological effects of reinstalling spawning gravel in Danish lowland streams**

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Brown trout (*Salmo trutta*) is naturally occurring in Danish streams, but today self-sustaining populations are missing from more than 75 % of all streams and populations are maintained by stocking. The lack of natural reproduction are in many streams caused by shortage of suitable spawning gravel, which have been removed through harsh stream maintenance practices. The natural reproduction of trout was investigated in small Danish streams where spawning gravel has been reintroduced as a stream rehabilitation tool. Streams were divided into three groups representing three different types of stream restoration projects: 1) reinstating spawning gravel only, 2) reinstating spawning gravel in connection with re-meandering of former straightened and channelised watercourses, 3) reinstating spawning gravel in connection with removal of barriers. Physical habitat conditions, coverage of spawning gravel, spawning activity and the density of young of the year trout were measured > 5 years after spawning gravel had been reinstated to investigate long term success of the restoration projects. The aim of this study was to investigate the ecological effects of reinstating spawning gravel as a rehabilitation measure for brown trout in Danish streams.