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**Effect of aquatic plant patches on flow and sediment characteristics:
the case of *Callitriche platycarpa* and *Elodea nuttallii***

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ABSTRACT

In lotic ecosystems, submerged aquatic vegetation has important effects on hydrodynamic and sediment processes. These effects depend on plant morphology and patch structure. This study aimed to test the effect of 2 aquatic plant species on flow and sediment characteristics. For this purpose we measured under natural conditions 3D velocity profiles and sediment characteristics along the main axis of one patch of each species. The 2 species presented contrasting effects on velocity, turbulence profiles and sediment characteristics: one species had significant effects on hydrodynamics and accumulation of fine sediment also further downstream of the patch, whereas the second one accumulated very fine sediment mainly in the upstream half of the patch. These results emphasize the role of plant morphology on hydrodynamics and sediment physicochemical characteristics.