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Ecological resilience after severe forest fire in the central Alpine Rhone valley, Switzerland

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A severe forest fire in summer 2003 destroyed 300 ha of forests in the central Alpine Rhone valley. Coincidentally, earlier vegetation descriptions, dating back to 1996, of the now burned areas between 800 and 2100 m a.s.l. were at hand. One year after the fire, old relevé plots were revisited and assessed using the same sampling methods. In addition, a systematic sampling design has served as monitoring system to observe the ongoing succession starting with year one after the fire. First results show that both species composition and species diversity one year after the fire are related to fire intensity (ash-layer) and altitude. Species richness is low at small scales, but astonishingly high at larger scales. Resilience measured by similarity indices between old and new relevés indicates that forest vegetation in higher altitudes recovers quicker than in lower altitudes.