Articles dans revues internationales

## 2014

Burylo, M., Dutoit, T., & Rey, F. (2014). Species traits as practical tools for ecological restoration of marly eroded lands. Restoration Ecology,

Lallias-Tacon, S., Liébault, F., & Piégay, H. (2014). Step by step error assessment in braided river sediment budget using airborne LiDAR data. Geomorphology, 214, 307-323.

Rey, F., & Burylo, M. (2014). Can bioengineering structures made of willow cuttings trap sediment in eroded marly gullies in a mediterranean mountainous climate? Geomorphology, 204, 564-572.

Stokes, A., Douglas, G. B., Fourcaud, T., Giadrossich, F., Gillies, C., Hubble, T., . . . Walker, L. R. (2014). Ecological mitigation of hillslope instability: Ten key issues facing researchers and practitioners. Plant and Soil, 377(1-2), 1-23.

Grangeon T., Droppo I.G., Legout C., Esteves M. (2014). From soil aggregates to riverine flocs: a laboratory experiment assessing the respective effects of soil type and flow shear stress on particles characteristics. Hydrological Processes. 28(13):4141-4155.

## 2013

Erktan, A., & Rey, F. (2013). Linking sediment trapping efficiency with morphological traits of salix tiller barriers on marly gully floors under ecological rehabilitation. Ecological Engineering, 51, 212-220.

Erktan, A., Cécillon, L., Roose, E., Frascaria-Lacoste, N., & Rey, F. (2013). Morphological diversity of plant barriers does not increase sediment retention in eroded marly gullies under ecological restoration. Plant and Soil, 370(1-2), 653-669.

Legout, C., Poulenard, J., Nemery, J., Navratil, O., Grangeon, T., Evrard, O., & Esteves, M. (2013). Quantifying suspended sediment sources during runoff events in headwater catchments using spectrocolorimetry. Journal of Soils and Sediments, 13(8), 1478-1492.

Liébault, F., Lallias-Tacon, S., Cassel, M., & Talaska, N. (2013). Long profile responses of alpine braided rivers in se france. River Research and Applications, 29(10), 1253-1266.

Phillips, C. J., Rey, F., Marden, M., & Liébault, F. (2013). Revegetation of steeplands in france and new zealand: Geomorphic and policy responses. New Zealand Journal of Forestry Science, 43, 1-16.

## 2012

Allouis, T.; Durrieu, S. & Couteron, P. (2012), A new method for incorporating hillslope effects to improve canopy-height estimates from large-footprint LIDAR waveforms, IEEE Geoscience and Remote Sensing Letters 9(4), 730-734.

Badoux, A., Turowski, J. M., Mao, L., Mathys, N., & Rickenmann, D. (2012). Rainfall intensity-duration thresholds for bedload transport initiation in small alpine watersheds. Natural Hazards and Earth System Science, 12(10), 3091-3108.

Burylo, M., Rey, F., & Dutoit, T. (2012). Responses of five woody species to burial by marly sediment: The role of biomass allocation pattern flexibility. Journal of Plant Ecology, 5(3), 287-293.

Burylo, M., Rey, F., Bochet, E., & Dutoit, T. (2012). Plant functional traits and species ability for sediment retention during concentrated flow erosion. Plant and Soil, 353(1-2), 135-144.

Burylo, M., Rey, F., Mathys, N., & Dutoit, T. (2012). Plant root traits affecting the resistance of soils to concentrated flow erosion. Earth Surface Processes and Landforms, 37(14), 1463-1470.

Duvert, C., Nord, G., Gratiot, N., Navratil, O., Nadal-Romero, E., Mathys, N., . . . Esteves, M. (2012). Towards prediction of suspended sediment yield from peak discharge in small erodible mountainous catchments (0.45-22km 2) of france, mexico and spain. Journal of Hydrology, 454-455, 42-55.

Garel, E., Marc, V., Ruy, S., Cognard-Plancq, A. -., Klotz, S., Emblanch, C., & Simler, R. (2012). Large scale rainfall simulation to investigate infiltration processes in a small landslide under dry initial conditions: The draix hillslope experiment. Hydrological Processes, 26(14), 2171-2186.

Grangeon, T., Legout, C., Esteves, M., Gratiot, N., & Navratil, O. (2012). Variability of the particle size of suspended sediment during highly concentrated flood events in a small mountainous catchment. Journal of Soils and Sediments, 12(10), 1549-1558.

Graz, Y., Di-Giovanni, C., Copard, Y., Mathys, N., Cras, A., & Marc, V. (2012). Annual fossil organic carbon delivery due to mechanical and chemical weathering of marly badlands areas. Earth Surface Processes and Landforms, 37(12), 1263-1271.

Liébault, F., Bellot, H., Chapuis, M., Klotz, S., & Deschâtres, M. (2012). Bedload tracing in a high-sediment-load mountain stream. Earth Surface Processes and Landforms, 37(4), 385-399.

Lofi, J., Pezard, P., Loggia, D., Garel, E., Gautier, S., Merry, C., & Bondabou, K. (2012). Geological discontinuities, main flow path and chemical alteration in a marly hill prone to slope instability: Assessment from petrophysical measurements and borehole image analysis. Hydrological Processes, 26(14), 2071-2084.

Navratil O.., Evrard O., Esteves M., Legout C., Ayraul S., Némery J., Mate-Marin A., Ahmadi M., Poirel A., Lefèvre I., Bonté P. (2012). Temporal variability of suspended sources in an alpine catchment combining river/rainfall monitoring and sediment fingerprinting. Earth Surface Processes and Landform 37(8), p. 828-846.

Navratil, O., Evrard, O., Esteves, M., Ayrault, S., Lefèvre, I., Legout, C., . . . Bonté, P. (2012). Core-derived historical records of suspended sediment origin in a mesoscale mountainous catchment: The river bléone, french alps. Journal of Soils and Sediments, 12(9), 1463-1478.

Neuville, A., Toussaint, R., & Schmittbuhl, J. (2012). Fracture aperture reconstruction and determination of hydrological properties: A case study at draix (french alps). Hydrological Processes, 26(14), 2095-2105.

Neuville, A., Toussaint, R., Schmittbuhl, J., Koehn, D., & Schwarz, J. -. (2012). Characterization of major discontinuities from borehole cores of the black consolidated marl formation of draix (french alps). Hydrological Processes, 26(14), 2085-2094.

Poulenard J., Legout C., Némery J., Bramorski J., Navratil O., Douchin A., Fanget B., Perrette Y., Evrard O., Esteves M. (2012). Tracing sediment sources during floods using Diffuse Reflectance Infrared Fourier Transform Spectrometry (DRIFTS): A case study in a highly erosive mountainous catchment (Southern French Alps). Journal of Hydrology, 414-415, p. 452-462.

Travelletti, J., Sailhac, P., Malet, J. -., Grandjean, G., & Ponton, J. (2012). Hydrological response of weathered clay-shale slopes: Water infiltration monitoring with time-lapse electrical resistivity tomography. Hydrological Processes, 26(14), 2106-2119.

## 2011

Burylo, M., Hudek, C., & Rey, F. (2011). Soil reinforcement by the roots of six dominant species on eroded mountainous marly slopes (southern alps, france). Catena, 84(1-2), 70-78.

Corona, C., Lopez Saez, J., Rovéra, G., Stoffel, M., Astrade, L., & Berger, F. (2011). High resolution, quantitative reconstruction of erosion rates based on anatomical changes in exposed roots at draix, alpes de haute-provence - critical review of existing approaches and independent quality control of results. Geomorphology, 125(3), 433-444.

Evrard, O., Navratil, O., Ayrault, S., Ahmadi, M., Némery, J., Legout, C., . . . Esteves, M. (2011). Combining suspended sediment monitoring and fingerprinting to determine the spatial origin of fine sediment in a mountainous river catchment. Earth Surface Processes and Landforms, 36(8), 1072-1089.

Graz, Y., Di-Giovanni, C., Copard, Y., Elie, M., Faure, P., Laggoun Defarge, F., . . . Olivier, J. E. (2011). Occurrence of fossil organic matter in modern environments: Optical, geochemical and isotopic evidence. Applied Geochemistry, 26(8), 1302-1314.

Le Bouteiller, C., Naaim-Bouvet, F., Mathys, N., & Lavé, J. (2011). A new framework for modeling sediment fining during transport with fragmentation and abrasion. Journal of Geophysical Research: Earth Surface, 116(3)

Navratil, O., Esteves, M., Legout, C., Gratiot, N., Nemery, J., Willmore, S., & Grangeon, T. (2011). Global uncertainty analysis of suspended sediment monitoring using turbidimeter in a small mountainous river catchment. Journal of Hydrology, 398(3-4), 246-259.

Saez, J. L., Corona, C., Stoffe, M., Rovéra, G., Astrade, L., & Berger, F. (2011). Mapping of erosion rates in marly badlands based on a coupling of anatomical changes in exposed roots with slope maps derived from LiDAR data. Earth Surface Processes and Landforms, 36(9), 1162-1171.

Vega, C. & Durrieu, S. (2011), Multi-level filtering segmentation to measure individual tree parameters based on Lidar data: Application to a mountainous forest with heterogeneous stands, International Journal of Applied Earth Observation and Geoinformation 13(4), 646-656.

## 2010

Graz, Y., Di-Giovanni, C., Copard, Y., Laggoun-Défarge, F., Boussafir, M., Lallier-Vergès, E., . . . Simonneau, A. (2010). Quantitative palynofacies analysis as a new tool to study transfers of fossil organic matter in recent terrestrial environments. International Journal of Coal Geology, 84(1), 49-62.

Navratil, O., Legout, C., Gateuille, D., Esteves, M., & Liebault, F. (2010). Assessment of intermediate fine sediment storage in a braided river reach (southern french prealps). Hydrological Processes, 24(10), 1318-1332.

Thommeret, N., Bailly, J. S., & Puech, C. (2010). Extraction of thalweg networks from DTMs: Application to badlands. Hydrology and Earth System Sciences, 14(8), 1527-1536.

## 2009

Bretar, F., A. Chauve, J. S. Bailly, C. Mallet and A. Jacome (2009). Terrain surfaces and 3-D landcover classification from small footprint full-waveform lidar data: Application to badlands. Hydrology and Earth System Sciences 13(8): 1531-1545.

Burylo, M., F. Rey, C. Roumet, E. Buisson and T. Dutoit (2009). Linking plant morphological traits to uprooting resistance in eroded marly lands (Southern Alps, france). Plant and soil 324(1): 31-42.

Chauve A., Véga C., Durrieu S., Bretar F., Allouis T., Pierrot Deseilligny M. and Puech, W.., 2009. Advanced full-waveform lidar data echo detection: Assessing quality of derived terrain and tree height models in an alpine coniferous forest. International Journal of Remote Sensing, 30(19): 5211 - 5228.

Rey, F. (2009). A strategy for fine sediment retention with bioengineering works in eroded marly catchments in a mountainous mediterranean climate (southern alps, france). Land Degradation and Development, 20(2), 210-216.

Yamakoshi, T., N. Mathys and S. Kiotz (2009). Time-lapse video observation of erosion processes on the Black Marls badlands in the Southern Alps, France. Earth Surface Processes and Landforms 34(2): 314-318.

## 2008

## 2007

Burylo, M., F. Rey and P. Delcros (2007). Abiotic and biotic factors influencing the early stages of vegetation colonization in restored marly gullies (Southern Alps, France). Ecological engineering 30(3): 231-239.

Copard, Y., P. Amiotte-Suchet and C. Di-Giovanni (2007). Storage and release of fossil organic carbon related to weathering of sedimentary rocks. Earth and Planetary Science Letters 258(1-2): 345-357.

Cras, A., V. Marc and Y. Travi (2007). Hydrological behaviour of sub-Mediterranean alpine headwater streams in a badlands environment. Journal of Hydrology 339(3-4): 130-144.

de Montety, V., Marc, V., Emblanch, C., Malet, J. -., Bertrand, C., Maquaire, O., & Bogaard, T. A. (2007). Identifying the origin of groundwater and flow processes in complex landslides affecting black marls: Insights from a hydrochemical survey. Earth Surface Processes and Landforms, 32(1), 32-48.

## 2006

Copard, Y., C. Di Giovanni, T. Martaud, P. Alberic and J. Olivier (2006). Using Rock-Eval 6 pyrolysis for tracking fossil organic carbon in modern environments: implications for the roles of erosion and weathering. Earth surface processes and landforms 31(2): 135-153.

Rey, F. and F. Berger (2006). Management of Austrian black pine on marly lands for sustainable protection against erosion (Southern Alps, France). New Forests 31(3): 535-543.

Sebag D., Disnar J.R., Guillet B., Di-Giovanni C., Verrechia E.P., Durand A. 2006. Monitoring organic matter dynamics in soil profiles by Rock Eval pyrolysis: bulk characterization and quantification of degradation. European Journal of Soil Science 57, 344-355.

Sebag, D., Y. Copard, C. Di-Giovanni, A. Durand, B. Laignel, S. Ogier and E. Lallier-Verges (2006). Palynofacies as useful tool to study origins and transfers of particulate organic matter in recent terrestrial environments: Synopsis and prospects. Earth-Science Reviews 79(3-4): 241-259.

Wainwright, J., N. Mathys and M. Esteves (2006). Gully erosion in mountain areas: Processes, measurement, modelling and regionalization. Earth Surface Processes and Landforms 31(2): 133-134.

## 2005

Cosandey, C., Andréassian, V., Martin, C., Didon-Lescot, J. F., Lavabre, J., Folton, N., . . . Richard, D. (2005). The hydrological impact of the mediterranean forest: A review of french research. Journal of Hydrology, 301(1-4), 235-249.

Esteves, M., Descroix, L., Mathys, N., & Lapetite, J. M. (2005). Soil hydraulic properties in a marly gully catchment (Draix, france). Catena, 63(2-3), 282-298.

Liébault, F., B. Gomez, M. Page, M. Marden, D. Peacock, D. Richard and C. M. Trotter (2005). Land-use change, sediment production and channel response in upland regions. River Research and Applications 21(7): 739-756.

Mathys, N., Klotz, S., Esteves, M., Descroix, L. and Lapetite, J.M., 2005. Runoff and erosion in the Black Marls of the French Alps: Observations and measurements at the plot scale. Catena, 63(2-3): 261-281.

Rey, F., F. Isselin and A. Bedecarrats (2005). Vegetation dynamics on sediment deposits upstream of bioengineering works in mountainous marly gullies in a Mediterranean climate (Southern Alps, France). Plant and soil 278): 149-158.

## 2004

Andreassian, V. (2004). Waters and forests: from historical controversy to scientific debate. Journal of hydrology 291(1-2): 1-27.

Berger, F. and F. Rey (2004). Mountain protection forests against natural hazards and risks: New french developments by integrating forests in risk zoning. Natural Hazards 33(3): 395-404.

Rey, F. (2004). Effectiveness of vegetation barriers for marly sediment trapping. Earth Surface Processes and Landforms 29(9): 1161-1169.

## 2003

Descroix, L. and N. Mathys (2003). Processes, spatio-temporal factors and measurements of current erosion in the French southern Alps: A review. Earth Surface Processes and Landforms 28(9): 993-1011.

Graff, B., C. Fouchier, J. Lavabre, N. Mathys, R. Didier, C. Martin and E. Servat (2003). Regional knowledge of flooding in the Mediterranean environment: research performance checks on three drainage basins. IAHS-AISH Publication 278): 290-297.

Mathys, N., S. Brochot, M. Meunier and D. Richard (2003). Erosion quantification in the small marly experimental catchments of Draix (Alpes de Haute Provence, France). Calibration of the ETC rainfall-runoff-erosion model. CATENA 50(2-4): 527-548.

Rey, F. (2003). Influence of vegetation distribution on sediment yield in forested marly gullies. CATENA 50(2-4): 549-562.

## 2002

Descroix, L. and E. Gautier (2002). Water erosion in the southern French alps: climatic and human mechanisms. CATENA 50(1): 53-85.

Descroix, L. and J.-C. Olivry (2002). Spatial and temporal factors of erosion by water of black marls in the badlands of the French southern Alps. Hydrological Sciences Journal 47(2): 227-242.

Vallauri, D. R., J. Aronson and M. Barbero (2002). An analysis of forest restoration 120 years after reforestation on badlands in the Southwestern Alps. Restoration Ecology 10(1): 16-26.

## 2000

Lukey, B. T., Sheffield, J., Bathurst, J. C., Hiley, R. A., & Mathys, N. (2000). Test of the SHETRAN technology for modelling the impact of reforestation on badlands runoff and sediment yield at draix, france. Journal of Hydrology, 235(1-2), 44-62.

## Avant 2000

Antoine, P., A. Giraud, M. Meunier and T. Van Asch (1995). Geological and geotechnical properties of the "Terres Noires" in southeastern France: Weathering, erosion, solid transport and instability. Engineering Geology 40(3-4): 223-234.

Bathurst, J. C., Lukey, B., Sheffield, J., Hiley, R. A., & Mathys, N. (1998). Modelling badlands erosion with SHETRAN at draix, southeast france. IAHS-AISH Publication, 249, 129-136.

Luckey B., Sheffield J., Bathurst J.C., Lavabre J., Mathys N., 1995, Simulating the effect of the vegetation cover on the sediment yield of mediterranean catchments using SHETRAN. Physics and chemistry of the earth, vol. 20, n°3-4 p. 427-432.

Oostwoud Wijdenes, D. J. and P. Ergenzinger (1998). Erosion and sediment transport on steep marly hillslopes, Draix, Haute-Provence, France: An experimental field study. CATENA 33(3-4): 179-200.