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Interactive comment on “The strength of the biotic compartment to retain nitrogen additions prevents nitrogen losses from a Mediterranean maquis” by T. Dias et al.

Anonymous Referee #3

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Nice that the authors have shown that sampling in the autumn gives a better picture of the N-losses.

Page 8043. Line 23. Please define “Mediterranean maquis”

Page 8044. Line 21. Please name the family that *C. ladanifer* belongs to (Cistaceae), and the other species that are mentioned on this page.

Interesting to note that 2 of the most dominant spp. are legumes (*Genista triacanthos*, *Ulex densus*). Did the authors note if they were nodulated, and hence may be making a significant contribution to the soil N via biological nitrogen fixation (BNF)? The same might also be said of the annual plants, as I would imagine that several of them are also

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legumes (I see from your paper in Plant and Soil, Dias et al. 2011, that Lotus, Trifolium and Vicia spp., were all present). BNF by legumes has long been known to decline if soil N increases, so it could be argued that the addition of the ammonium/nitrate may have been partly offset by a consequent reduction in the contribution to soil N made by any nodulated legumes that were present in the plots. Of course, this contribution may not be significant, but nevertheless is still worthy of a comment.

Page 8050. Lines 9-10. Please correct: “caused a decreased of the *C. ladanifer*”

Page 8050. Line 15. “The C/N ratio of *C. ladanifer*”

Page 8051. Line 13. Do you mean “and so low...”? It would make more sense.

Page 8054. Line 4. “respectivee”

Interactive comment on Biogeosciences Discuss., 8, 8041, 2011.

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8, C3541–C3542, 2011

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