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Interactive comment on "Time since death and decay rate constants of Norway spruce and European larch deadwood in subalpine forests determined using dendrochronology and radiocarbon dating" *by* M. Petrillo et al.

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This ms represents an interesting contribution to the study of dead wood dynamics, even if based on a limited sample size (some sample sizes of only 3 CWD per decay class if I understand Table 5 correctly).

I agree with T. Kahl that the sampling bias due to slowly decaying samples should be better acknowledged.

In my opinion, one other minor point deserves to be addressed: In the first paragraph of

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their discussion, the authors refer to studies that showed that the decay rate of standing dead wood is slower than dead wood in contact with the forest floor. This contributes to explain the absence of clear differences in properties in classes 1-3. The same argument might potentially be used to explain the differences in decay rates of larch and spruce. Assessing the time elapsed standing of an individual CWD retrospectively is impossible, but the discussion would be improved if the influence of species-specific snag fall rates were acknowledged: For instance, if fall rates of snags of the two studied species are known and that larch snags remain significantly longer standing, they are exposed for shorter periods to good decaying conditions on the ground and this might also explains their slower decay rate.

Interactive comment on Biogeosciences Discuss., 12, 14797, 2015.