Cover letter

Eduardo Fernández-Pascual

20/6/2020

Dear Editorial Board,

I submit my manuscript SylvanSeeds, a seed germination database for temperate deciduous forests to be considered for publication as a **Report** in the Journal of Vegetation Science. This is a first submission to JVS and it comprises work that has not been published, and is not being considered for publication elsewhere.

This report describes *SylvanSeeds*, a database and web app (https://efernandezpascual.shinyapps.io/sylvanseeds/) of raw germination records for frequent species of temperate broadleaf and mixed forests. The list of frequent species was created using 17,852 vegetation relevés from the sPlot database (Bruelheide et al. 2019).

SylvanSeeds makes publicly available 4,828 germination records of 364 species from 74 families, collected in 46 countries between 1920-2017. The database is the result of a systematic literature search that screened 6,791 references and extracted raw data from 614. This manuscript presents the search methodology, applicable to other biomes.

Plant science is embarked on a global synthesis of functional traits at species (Díaz et al. 2016) and community levels (Bruelheide et al. 2018). Synthesis of seed functions is however hindered by a lack of global germination datasets (Saatkamp et al. 2019), a gap filled by *SylvanSeeds*.

References

Bruelheide, H., Dengler, J., Jiménez-Alfaro, B., Purschke, O., Hennekens, S.M., Chytrý, M., Pillar, V.D., Jansen, F., Kattge, J., & Sandel, B. 2019. sPlot–A new tool for global vegetation analyses. *Journal of Vegetation Science* 30: 161–186.

Bruelheide, H., Dengler, J., Purschke, O., Lenoir, J., Jiménez-Alfaro, B., Hennekens, S.M., Botta-Dukát, Z., Chytrý, M., Field, R., & Jansen, F. 2018. Global trait—environment relationships of plant communities. *Nature Ecology & Evolution* 2: 1906–1917.

Díaz, S., Kattge, J., Cornelissen, J.H.C., Wright, I.J., Lavorel, S., Dray, S., Reu, B., Kleyer, M., Wirth, C., Colin Prentice, I., Garnier, E., Bönisch, G., Westoby, M., Poorter, H., Reich, P.B., Moles, A.T., Dickie, J., Gillison, A.N., Zanne, A.E., Chave, J., Joseph Wright, S., Sheremet'ev, S.N., Jactel, H., Baraloto, C., Cerabolini, B., Pierce, S., Shipley, B., Kirkup, D., Casanoves, F., Joswig, J.S., Günther, A., Falczuk, V., Rüger, N., Mahecha, M.D., & Gorné, L.D. 2016. The global spectrum of plant form and function. *Nature* 529: 167–171.

Saatkamp, A., Cochrane, A., Commander, L., Guja, L.K., Jimenez-Alfaro, B., Larson, J., Nicotra, A., Poschlod, P., Silveira, F.A., & Cross, A.T. 2019. A research agenda for seed-trait functional ecology. *New Phytologist* 221: 1764–1775.