*Unfortunately we did not tested for evidence of physiological dormancy all 9 seedlots considered in this manuscript but we assumed MD o be a trait shared among all them, based on the findings of Blandino et al., 2019. In fact, embryo growth rate seemed to be directly influenced by temperature in all populations, with the higher growth rate being comprised among 2.5 and 5 °C in all of them and, if considering each seedlot optimal temperature for embryo growth, no apparent block on embryo growth appear, being the measurement taken 28 days after sowing, already different than the initial E:E ratio in all populations.*

*The line between MD and MPD is subtle if the approach followed by Walkers et al.(2021) is not taken in account (and we haven’t). It is necessary to check the literature regarding all the species listed in Baskin & Baskin 2014 in order to exclude of include the presence of a physiological component in their seed dormancy*

*In Baskin and Baskin (2014) MD is defined when embryo growth and germination occurs in 4 weeks or less. According to this definition, Conopodium majus seeds, which take around 18 weeks to complete embryo growth and begin germination, should be considered as MPD. However, if we do consider the time when embryo growth actually begin inside the seed we can appreciate it already within a month*

*In our manuscript, as well as in Blandino et al., 2019, we reported MD for Conopodium majus because, based on the experiments that we performed, we could not find evidence of a physiological component in seed dormancy. In fact, in Blandino et al., 2019, embryos were dissected in seeds kept at four temperature regimes (0, 5, 10 and 10/0 °C) in order to verify which temperature should considered optimal for performing the other experiments (actually, we did also a pre-screening, testing 7.5 and 15 °C, in order to try a warm stratification treatment, but it resulted ineffective and the data were never published) and we found a strong inhibition at temperatures higher than 5°C and a homogeneous embryo growth in seeds kept at 5°C. It appeared that all the seeds kept at this temperature were not physiologically dormant, because embryo growth started soon after imbibition and radicle emergence occurred immediately when embryos reached their critical size for it. In order to collect more evidence on the likely absence of a physiological block on embryo growth we tested the effect of GA3 and KNO3 addition to the growing media and we compared embryo growth in seeds exposed to light or incubated in continuous darkness, without having a significant effect of final germination percentage. None of these tests proved to significantly influence seed final germination if compared with the control (5°C in presence of light). Therefore we excluded the presence of a physiological component of seed dormancy.*

*As reported also by Walkers et al. (2021), gibberellins (in our case GA3 and not GA4+7) did not significantly improved the final germination percentage but had an effect on germination speed, anticipating it by, on average 20 days. In fact, in the GA3 treatment the first germination was scored 12 weeks after sowing, compared with the 18 weeks of the control.*

*We based our tests, both in Blandino et al. 2019 than in the present manuscript, on the ecology of the species. In fact, from a literature survey on its distribution and ecology and from field observations we found that:*

1. *C. majus as a north Atlantic distribution and its southernmost populations grow at high elevation*
2. *C. majus grows on woodland understorey or on oligotrophic meadows (that may have been former woodlands)*
3. *In Scotland and in England (more of less the central latitude for its distribution), seedling emergence in the natural environmenta was observed in January/February*

*We therefore excluded:*

1. *The need for a warm stratification*
2. *High germination temperatures*

*We tested cold stratification in a pre-screening test only to find that the supposed “stratification temperatures” of 2.5 and 5°C coincided with the optimal temperature for embryo growth and germination*