Appendix S5. Correlation of native and exotic species richness: a global meta-analysis finds no invasion paradox across scales. Peng et al. *Ecology*.

Quality criteria for meta-analysis

Materials and Methods

We used two methodological criteria, publication bias and temporal change in effect size, to test how robust our results were. Specifically, to evaluate publication bias, funnel plot asymmetry was characterized assuming that the range of effect size would increase as sample size decreases (i.e., higher sampling variance), and if studies with small sample size or non-significant results were scarce, there will be a gap in the mouth of the funnel plot. We plotted Fisher's Z against standard error and used the Egger regression equation to quantitatively test funnel plot asymmetry (Egger et al., 1997). Moreover, because the publication year of papers included in database spanned nearly 30 years, we conducted a cumulative meta-analysis by adding studies successively in order of publication year, which estimated the change in direction and magnitude of the overall effect size over time.

Results

The results of the Egger regression test suggest that there is no publication bias in the data (Z= -0.5240, P = 0.6002, Fig. S1). The cumulative meta-analysis showed that in the first set of years (1988-1997), the mean effect sizes were significantly negative, but have gradually become positive and stabilized over time (Fig. S2).

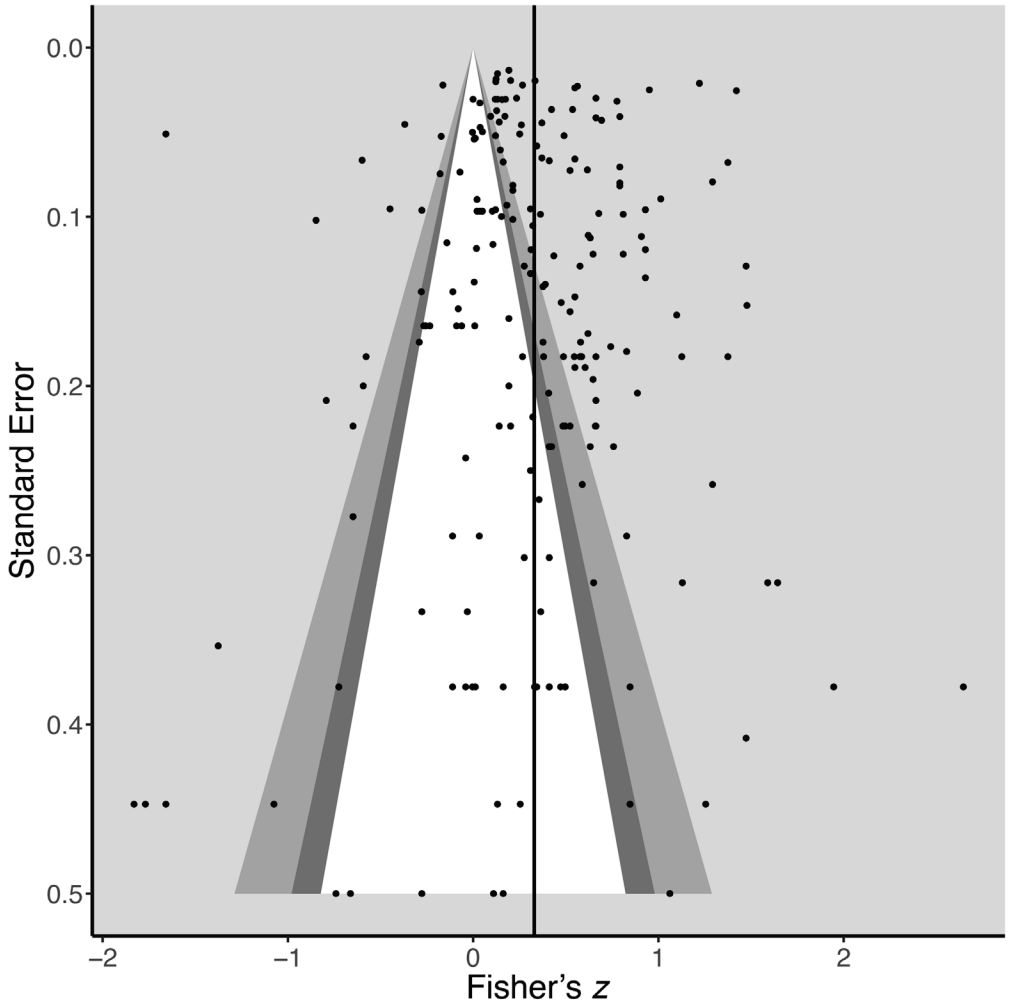

Fig. S1 Funnel plot showing the spread of effect sizes around the mean. The vertical line is the estimated effect size from the random-effects model. The funnel region is centered at 0. Regions of statistical significance are indicated by the shaded regions: the white region represents p-values > 0.10, the dark gray region represents p-values between 0.10 and 0.05, the medium gray region represents p-values between 0.05 and 0.01, and the light gray region outside of the funnel represents p-values < 0.01.

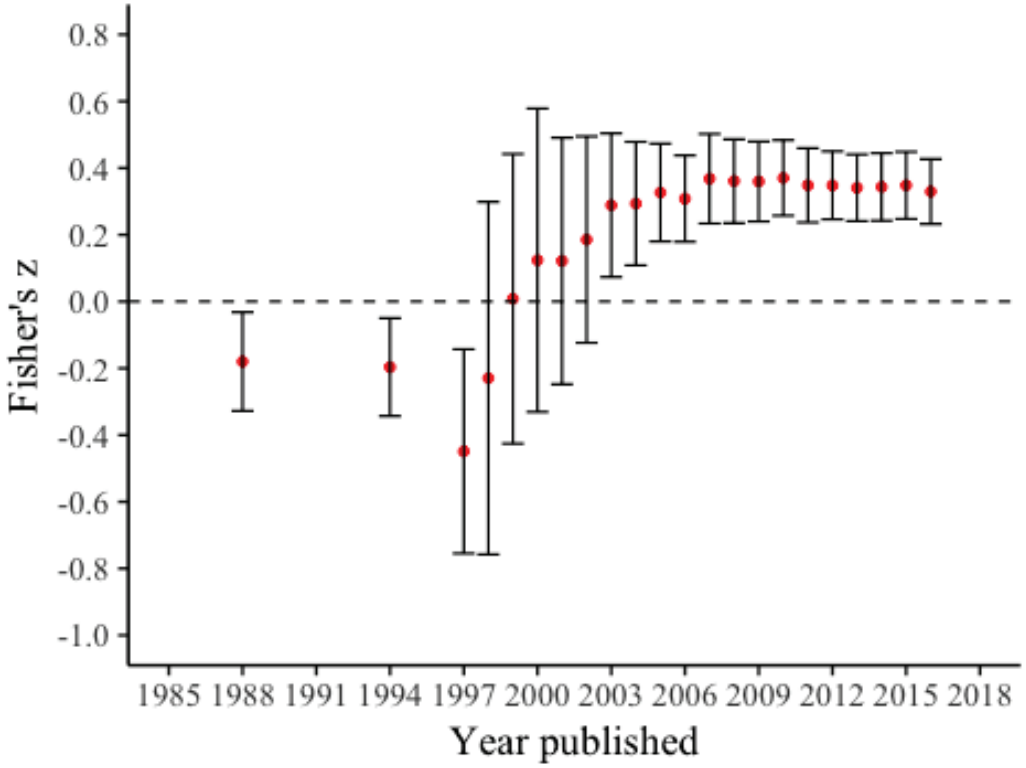

Fig. S2 Cumulative meta-analysis showing the change in magnitude of cumulative effect size with publication year. Points show mean effect size bracketed by 95% confidence intervals. The zero line is reference line.

Reference

Egger, M., G. D. Smith, M. Schneider, and C. Minder. 1997. Bias in meta-analysis detected by a simple, graphical test. Bmj **315**:629-634.