* A compositional novelty index based on multidimensional ordination is straightforward to calculate and only requires species co-occurrence data for urban and reference pre-urban habitats.
* Novelty was the highest for plant communities and the lowest for soil bacteria.
* Urban communities were markedly different from forest communities and relatively more like meadow communities.
* Compositional novelty was highest in industrial vacant lots, and lowest in residential vacant lots.
* Park lawns were relatively close in composition to hay meadows.