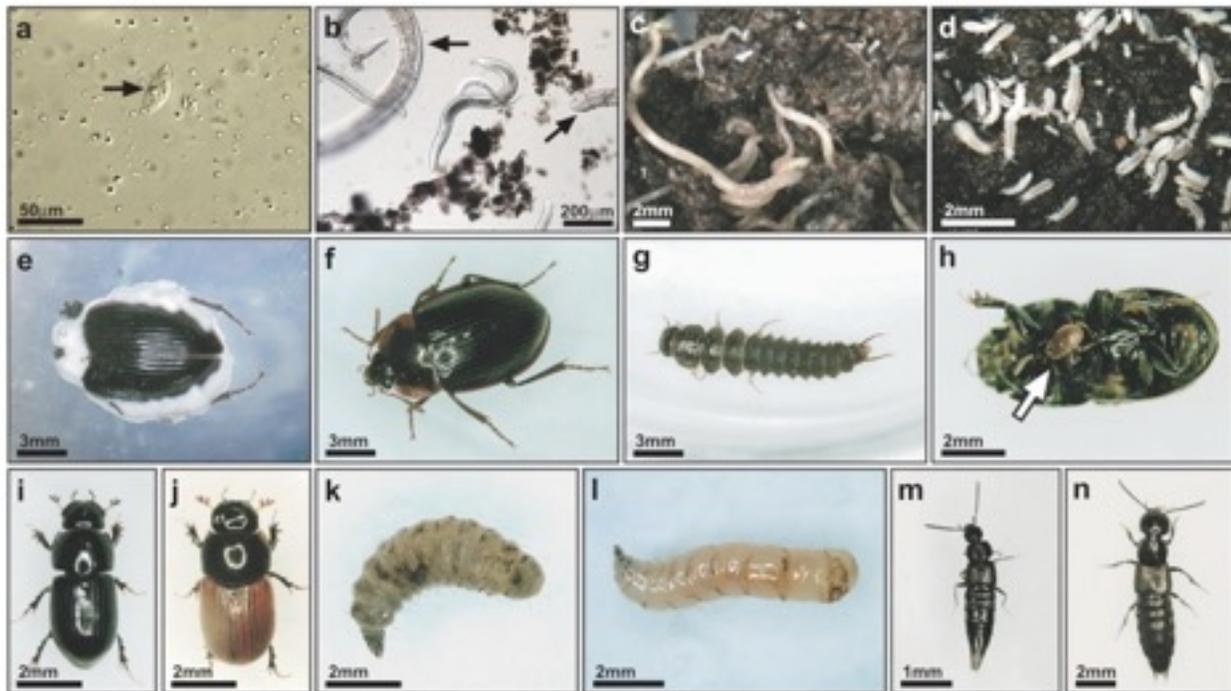


Who Are the People In Your Neighborhood?



Garden soil and a backyard compost pile may not have the great diversity of soil creatures found on the forest floor of an old growth forest, but they still have all the major members of a healthy soil food web. My friend Mark Sturges in Bandon, Oregon recently sent me a cup of compost from one of his bins, and we set about imaging the inhabitants of this compost.

Quite a crew of organisms participates in decomposing the plant materials. Beetles such as the primitive carrion beetles (agrytid beetles, f) and their larvae (g) along with several species of scarab (dung) beetles (i, j) help shred and mix the decaying matter. These beetles are assisted by mites (h) that live as stowaways on beetle bellies and under beetle wing covers. These hitchhiking mites help their beetles compete with fly larvae for the coveted decaying matter; mites tag along to feed on eggs and young larvae of flies such as those of soldier flies (k) and flies related to fruit flies (l).

Countless bacteria (a), fungi, potworms [arrows in b point to small potworms, c shows larger potworms] and springtails (d) along with a few earthworms participate in converting compost to humus. Protozoa (arrow in a) that feed on bacteria (and even some fungi such as the insect eating *Beauveria* shown here (e) on the remains of an agrytid beetle) represent the smallest predators of the compost. Nematodes (b) that feed on the bacteria, fungi, and protozoa represent larger predators.

And in this bin, the rove beetles (m, n) with their sickle-shaped jaws are the largest predators. The food web of each compost and garden soil has its own unique mix of species. Sizes of all organisms are indicated with scale bars [1000 μm = 1 mm].