

Testing the energetic equivalence rule with helminth endoparasites of vertebrates

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Abstract

As a general test of the energetic equivalence rule, we examined macroecological relationships among abundance, density and host body mass in a comparative analysis of the assemblages of trophically transmitted endoparasitic helminths of 131 species of vertebrate hosts. Both the numbers and total volume of parasites per gram of host decreased allometrically with host body mass, with slopes roughly consistent with those expected from the allometric relationship between host basal metabolic rate and body mass. From an evolutionary perspective, large body size may therefore allow hosts to escape from the deleterious effects of parasitism.