

# Individual Variation in Morphological, Physiological, and Biochemical Features Associated with Calling in Spring Peepers

Abstract from the [article](#):

In an eastern North American tree frog, the spring peeper (*Pseudacris crucifer*), calling rate has been correlated with reproductive success in the field. To determine the sources of individual variation in calling rate in this species, I analyzed males calling at rates greater than and less than the chorus average throughout one breeding season. Compared to low-rate callers, high-rate callers were relatively larger, heavier, older, and in better body condition, and their muscles used in calling had higher activities of the enzymes citrate synthase and  $\alpha$ -hydroxyacyl-CoA dehydrogenase. This muscle profile is functionally matched by cardiovascular correlates, as indicated by the larger ventricles and higher blood hemoglobin concentrations in high-calling rate males. These cardiovascular features are much less developed in females and may result from the fact that females do not engage in vigorous calling behavior. In *P. crucifer*, a male's calling rate may function as an indicator of the presence of a suite of functionally interrelated traits responsible for the maintenance of this sexually selected display behavior.