

Questions on Irschick and Losos

Jillian

Could we touch on the use of the size classes Irschick and Losos use to regulate the field habitat variables at the top right-hand column of page 221? I understand why they were used, but not how the classes were implemented.

Kevin

According to this article, lizards don't reach maximal speed when escaping. Typically they escape at only 90% their maximal speed. Is this because they only go fast enough to ensure that they escape from a predator, in order to conserve as much energy as possible? If this is the case, lizards should sprint faster if escaping from a faster predator. In the experiment, lizards were approached at only 30 m/min. The slowest lizard has a maximal speed of 48 m/min. Thus, it would not need to sprint at its maximal speed to avoid danger.

Is there some reason that 30 m/min was the chosen speed-- i.e. it corresponds to the speed of a typical predator?

Max

I was wondering if we could discuss other techniques for jumping and sprinting measuring and how the lizards use jumping and sprinting for other activities than escape, feeding, and undisturbed activity. I also don't really understand undisturbed activity.

Leah

Why do the authors emphasize that it is important to conduct field and laboratory performance studies together, to make sure they actually perform in nature the same as in the laboratory? p. 224

Kerry

How do Irschick and Losos explain a lower jumping performance than maximal capabilities in relation to coevolution?

Joo Hyun

What do Irschick and Losos mean by "Maximal sprinting and jumping ability have coevolved among anole species" and what evidence/prediction do they suggest to back up this?

Hanna

If lizards don't run at full speed in the wild because they don't have to, how does the trait for running fast get passed along?

JP

In the paper, Irschick and Losos say it is possible that anoles evolved a performance capability (maximal jumping) that may be unimportant to fitness (p. 224). Out of curiosity, do we know how frequently this occurs in other organisms? Are there any specific examples?

Matt

Irschick and Losos deduce the evolutionary mechanisms leading to trait development in anoles by comparing their maximal abilities to their field abilities. It seems to me that this would be a difficult undertaking with other organisms, for reasons dependent on the type of organism being studied. What are some other ways biologists try to understand evolutionary mechanisms leading to particular morphologies? Have things changed since this article was published (1998)?

Ben

Why did the authors exclude any information on the types of predators that prey on the different species of lizards? Are they all the same? Are some species preyed on more or less than others? Are these factors relevant to a lizard's necessity to use its maximum sprint speed?

Stephanie

What is the difference between 1 and 2 tailed statistical testing (t-tests?), and why was the 2-tailed test appropriate in this experiment?