On a global scale, organisms face significant challenges due to-climate change. Reptiles are

unique because the environment they develop in can influence-individual traits. This

phenomenon-is known as developmental plasticity, and such responses can have effects on

individual fitness depending on their environment. We aimed to understand how temperature

and maternal resources influence fitness-related traits across reptiles. Our results show the

magnitude of developmental plasticity on physiological traits appears to be limited-across

reptile taxa. Our data suggest behavioural or evolutionary processes, as opposed to

developmental plasticity, maybe more critical in mitigating the impacts of climate change in the

future.

Our research suggests that reptiles may require alternative adaptation mechanisms in the future, and more studies are necessary to understand how environmental conditions impact their physiology.

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Climate change poses significant challenges to organisms worldwide. Reptiles have unique traits that enable them to thrive in their specific environments through developmental plasticity.

Our study investigated how temperature and maternal resources affect fitness-related traits in reptiles,

finding that the impact of developmental plasticity on physiological traits is limited across reptile species. Instead, behavioral and evolutionary processes may be more critical in adapting to climate change. Our research suggests that reptiles may require alternative adaptation mechanisms in the future, and more studies are necessary to understand how environmental conditions impact their physiology.