

FOCUS DAY – TALK

What makes a great invader?

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Global warming and temperature variation are impacting organisms world-wide. Despite the fact that the strongest species declines have been observed in amphibians, some introduced exotic amphibians have been able to quickly adapt to new environmental conditions. The interaction between these invasive species and climate change can lead to unprecedented risks to native populations. Therefore, gathering knowledge on how these invaders might benefit from warmer temperatures is needed to assess future threats. Marsh frog (*Pelophylax ridibundus*) are an overlooked invasive species that was introduced all over Western Europe. Because physiological mechanisms are strongly dependent on temperature, investigating thermal limits and the impact of temperature on dispersal-related traits will provide insights on the response of this invasive species to predicted climate change. We measured the critical temperature, the thermal preference and the thermal range of multiple behavioral and physiological traits of invasive marsh frogs that were introduced in southern France. Marsh frogs showed a thermal tolerance broader than any other known invasive amphibians. Moreover, their thermal preference and both thermal optima for exertion capacity and burst performance were higher than the current average temperature in their habitat. These results suggest that climate change has favoured the spread of this invasive species and will continue to do so given the current predictions.