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Neuroinflammation and psychiatric illness

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Abstract

Multiple lines of evidence support the pathogenic role of neuroinflammation in psychiatric illness. While systemic autoimmune diseases are well-documented causes of neuropsychiatric disorders, synaptic autoimmune encephalitides with psychotic symptoms often go under-recognized. Parallel to the link between psychiatric symptoms and autoimmunity in autoimmune diseases, neuroimmunological abnormalities occur in classical psychiatric disorders (for example, major depressive, bipolar, schizophrenia, and obsessive-compulsive disorders). Investigations into the pathophysiology of these conditions traditionally stressed dysregulation of the glutamatergic and monoaminergic systems, but the mechanisms causing these neurotransmitter abnormalities remained elusive. We review the link between autoimmunity and neuropsychiatric disorders, and the human and experimental evidence supporting the pathogenic role of neuroinflammation in selected classical psychiatric disorders. Understanding how psychosocial, genetic, immunological and neurotransmitter systems interact can reveal pathogenic clues and help target new preventive and symptomatic therapies.

“Reviewing...the evidence supporting the pathogenic role of neuroinflammation in selected psychiatric disorders...”

Infectious Diseases

NASA Finds Drought in Eastern Mediterranean Worst of Past 900 Years



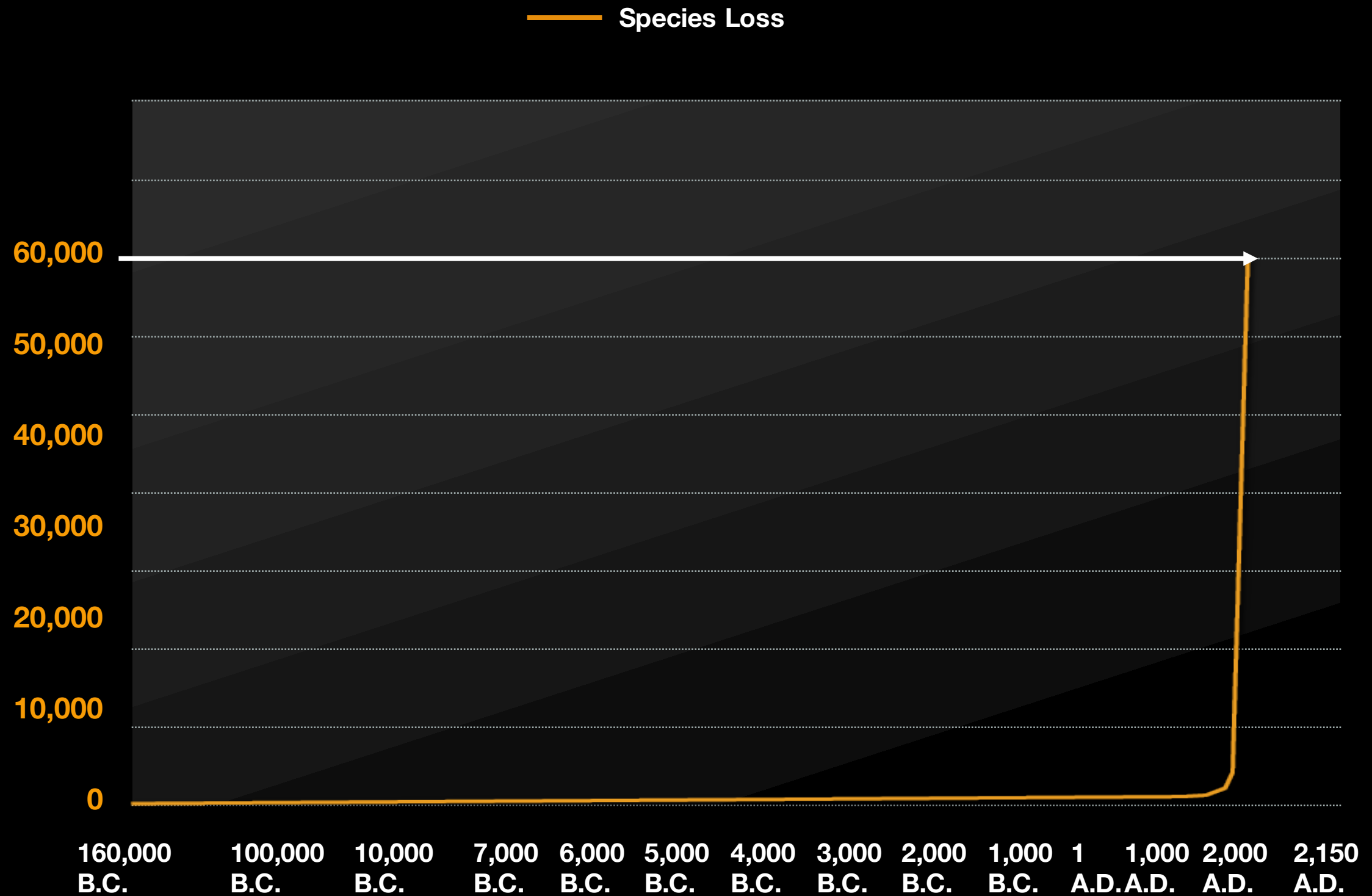
A new NASA study finds that the recent drought that began in 1998 in the eastern Mediterranean Levant region, which comprises Cyprus, Israel, Jordan, Lebanon, Palestine, Syria, and Turkey, is likely the worst drought of the past nine centuries.

Scientists reconstructed the Mediterranean's drought history by studying tree rings as part of an effort to understand the region's climate and what shifts water to or from the area. Thin rings indicate dry years while thick rings show years when water was plentiful.





Species Loss





Antimicrobials



Squalamines



Pain Killers



Regeneration



Osteoporosis
Type II Diabetes



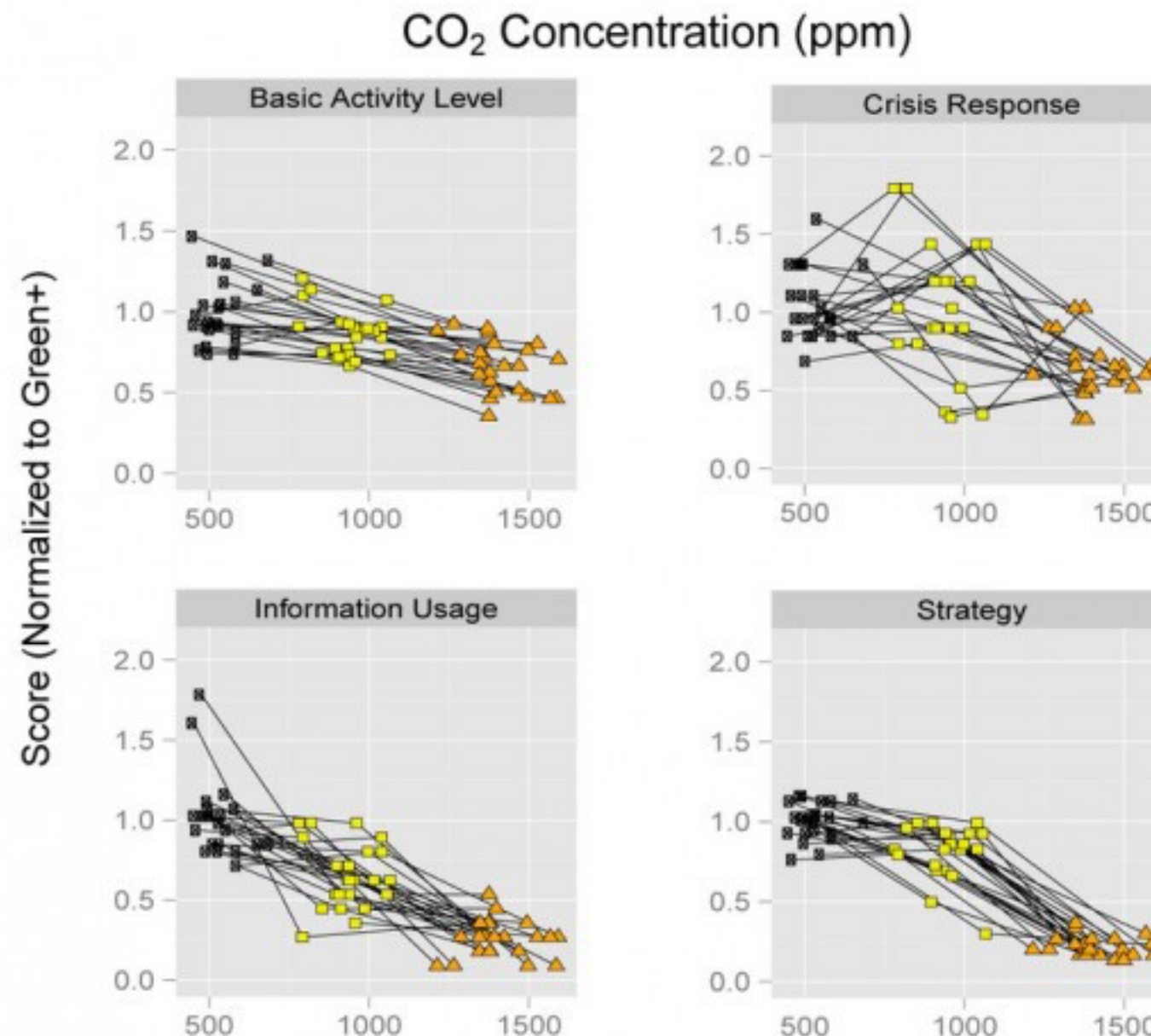
The relationship between hot weather and crime is linear -- as it gets hotter, people get more aggressive



4% between individuals

14% between groups

How CO2 Levels Affect Human Cognition



Normalized cognitive function scores by participant and corresponding CO₂ levels in their cubicle. The Green+ case had CO₂ in the 500 ppm range due to high levels of outside air. It was compared to office settings in the 930 ppm range (yellow squares) and in the 1400 ppm range (orange triangles).

■ Green+ ■ Medium CO₂ ▲ High CO₂







