

other in different ways and are less dependent on global climatic gradients than are terrestrial habitats (presumably because water is less limiting).

We assessed patterns of both abiotic and biotic characteristics across global gradients of precipi-

(Tooth and McCarthy 2007, Tooth and Viles 2014). In semi-arid climates, wetland habitat will be predominantly associated with seasonal river flooding rather than precipitation or groundwater. Along altitude gradients, precipitation drives water tables at low elevations, whereas high-ele-

drainages. However, these sediment load generalizations developed over temperature gradients

Hemisphere temperate lakes increased with increased surface irradiance, whereas daily GPP in tropical lakes decreased with increased light availability due to photoinhibition (Staeher et al. 2016). Greater irradiance warmed lakes and weakened thermal stratification in tropical lakes relative to temperate lakes (Lewis 1996). Warmer

temperature effects on stream denitri cation
rates across temperate biomes.

taxa. This suggests harsh climate conditions filter some groups, but those adapted for the conditions can proliferate. For example, the diversity of large branchiopods (fairy shrimps, clam shrimps, tadpole shrimps) tends to be greatest in wetlands with harsh environmental conditions (see Boix and Batzer 2016).

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