



Limnologist known for her research about the biogeochemical and ecological implications of physical processes in Arctic, Subarctic and tropical lakes and coastal zones.

She is one of the main references in the field of the greenhouse gas fluxes in lakes.

Professor at the University of California since 2004 and editor of important journals, such as Limnology and Oceanography.

SALLY MACINTYRE

UNITED STATES

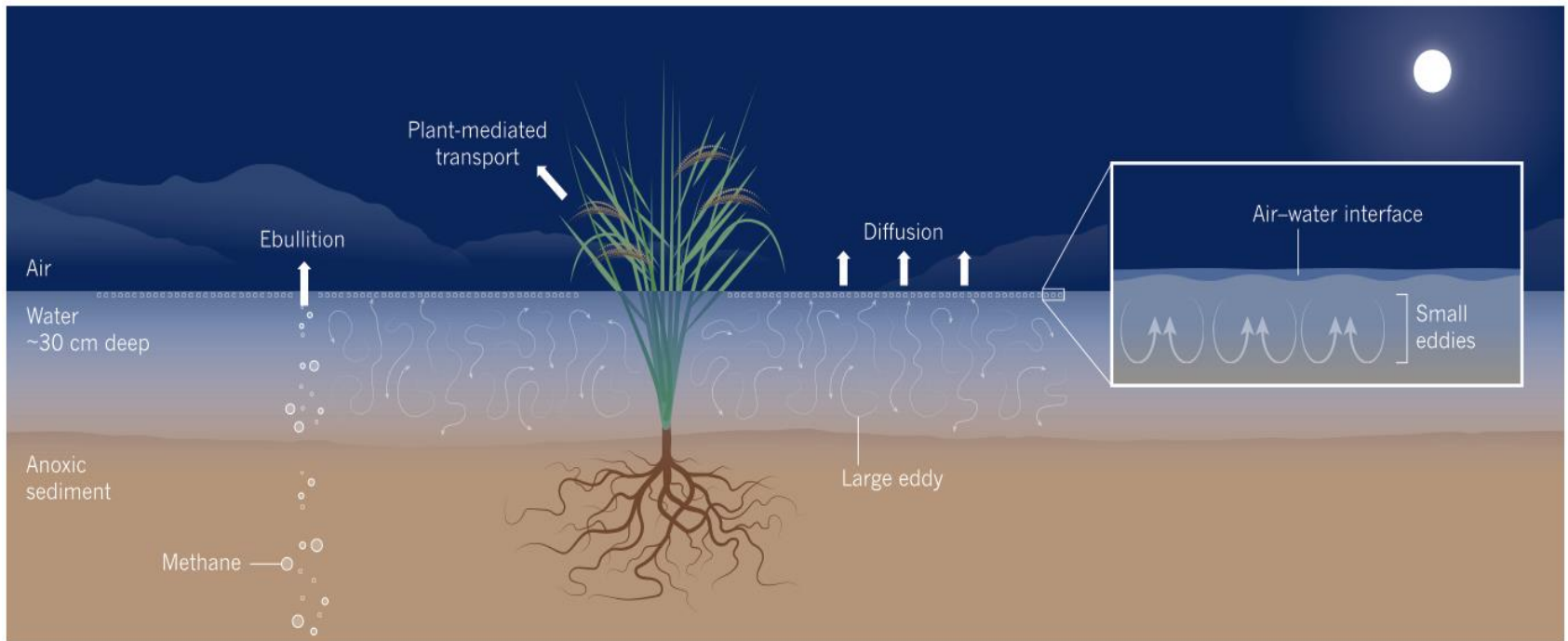
HERSTORY

Sally has contributed in the understanding of the transport processes in lakes. She has been precursor of the using of mechanistic approaches in hydrodynamics and gas transfer, having implications for global climate change understanding.

CONVECTION & NOCTURNAL GAS FLUXES

Greenhouse gases (CO₂ and CH₄) from inland waters are emitted via **diffusion** at higher rates during night than day time due to **convection**.

“During night, cooling surface water go down, displacing the underlying water and forming eddies. Large eddies circulate CH₄ throughout the water column, whereas smaller, near-surface eddies renew the CH₄ at the air–water interface, increasing CH₄ flux to the atmosphere”.



Katey W. Anthony & Sally MacIntyre. (2016). Nature.

RELEVANT CONTRIBUTIONS

MacIntyre, S. (1993). Vertical mixing in a shallow, eutrophic lake: Possible consequences for the light climate of phytoplankton. *Limnology and Oceanography*, 38, 798-817.

MacIntyre, S., Melack, J. M. (1995). Vertical and horizontal transport in lakes: linking littoral, benthic, and pelagic habitats. *Journal of the North American Benthological Society*, 14, 599-615.

MacIntyre, S., Flynn, K. M., Jellison, R., Romero, J. R. (1999). Boundary mixing and nutrient fluxes in Mono Lake, California. *Limnology and Oceanography*, 44, 512-529.

MacIntyre, S., Romero, J. R., Kling, G. W. (2002). Spatial-temporal variability in surface layer deepening and lateral advection in an embayment of Lake Victoria, East Africa. *Limnology and Oceanography*, 47, 656-671.

MacIntyre, S., Jonsson, A., Jansson, M., Aberg, J., Turney, D. E., Miller, S. D. (2010). Buoyancy flux, turbulence, and the gas transfer coefficient in a stratified lake. *Geophysical Research Letters*, 37.

LOOKING
FOR MORE?

You can find more information about her story and research at:

<https://scholar.google.com/citations?user=GPIRH18AAAAAJ&hl=es>

<https://www.eemb.ucsb.edu/people/faculty/macintyre>