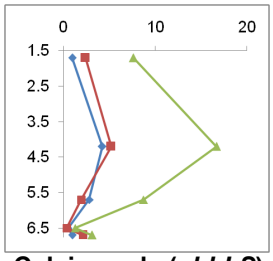
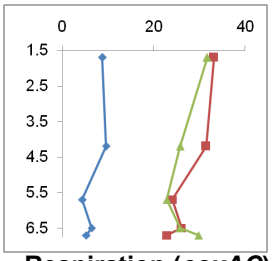
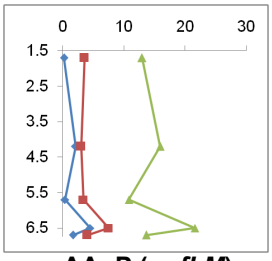
A



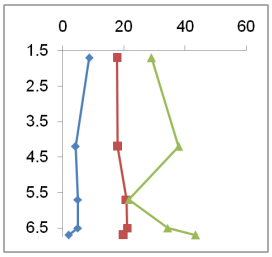
Calvin cycle (*cbbLS*)



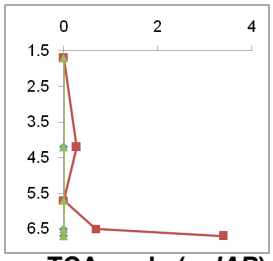
Respiration (*coxAC*)



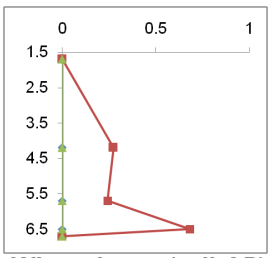
AAnP (*pufLM*)



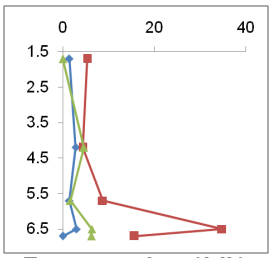
Rhodopsin



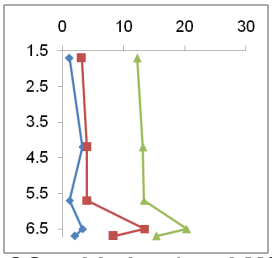
rTCA cycle (*aclAB*)



WL pathway (*cdhAB*)

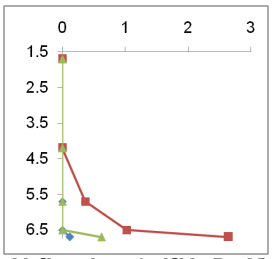


Fermentation (*ldh*)

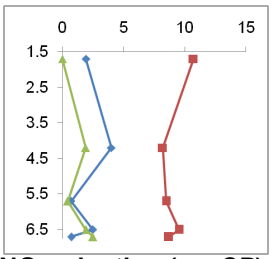


CO oxidation (*coxLMS*)

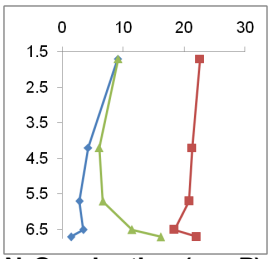
B



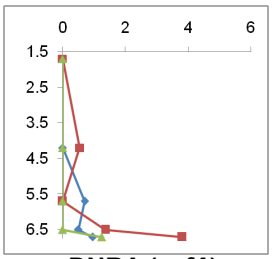
N fixation (*nifH,-D,-K*)



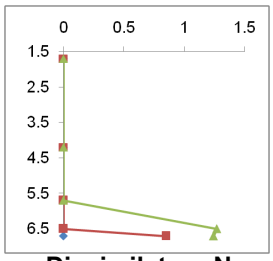
NO reduction (*norCB*)



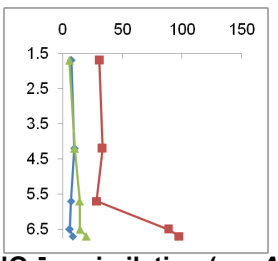
N_2O reduction (*nozB*)



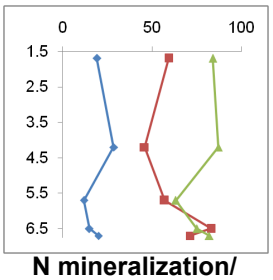
DNRA (*nrfA*)



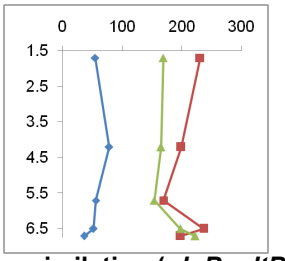
Dissimilatory N reduction (*hao*-like)



NO_3^- assimilation (*nasA*)



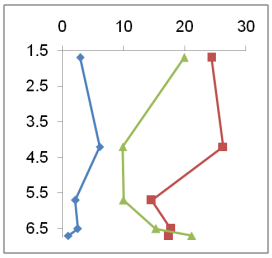
N mineralization/ assimilation (*gdhA*)



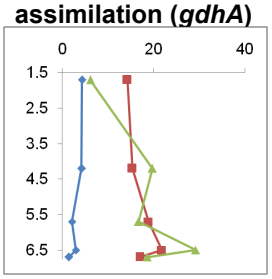
N assimilation (*glnB*, *gltBS*)

C

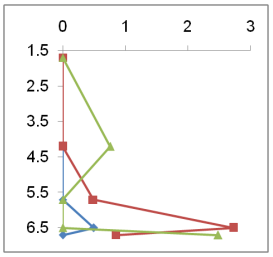
DSR (*dsrAB*, *aprAB*)



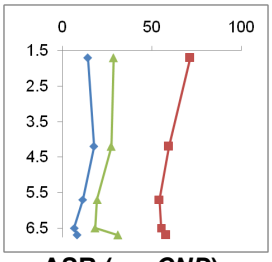
S oxidation (*soxAB*)



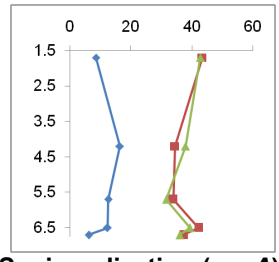
S oxidation (*soxCD*)



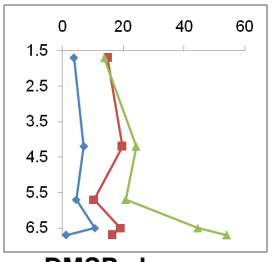
DMSO reduction (*dmsA*)



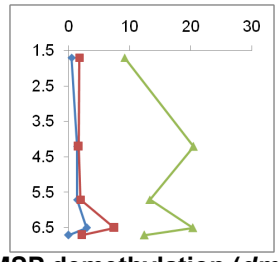
ASR (*cysCND*)



S mineralization (*sseA*)



DMSP cleavage (*dddD,-L,-P*)



DMSP demethylation (*dmdA*)