

Chattonella antiqua

Chattonella antiqua

2009 33 2010 54

1972

γ -Proteobacteria CFB

C. antiqua

2012 6 -9 1

2 km

500 mL

200 mL

500 10^{-4}

10^{-2} -10^{-4}

ST10⁻¹

10^{-3}

10^{-1} - 10^{-3}

3.0 μ m

(PAB: Particle-associated bacteria)

(FLB: Free-living bacteria)

ST10⁻¹

6 -9 1

0 m

1 m (B-1m) 500 mL

(Colony forming unit: CFU mL⁻¹)

48

(1%) DAPI

C. antiqua

14 hL: 10 hD 50-100 μ mol photons m⁻² s⁻¹ 20 1

2

36

119

16SrRNA

(500 bp)

BLAST

3.3 - 9.0×10^8 cells g wet leaf⁻¹

1.8-2.0 x 10⁶ cells mL⁻¹

8.9 x 10⁵-1.7 x 10⁶ cells mL⁻¹

0 m 6.1 x 10⁵-3.9 x 10⁶ cells mL⁻¹

B-1 m 4.4 x 10⁵ -1.6 x 10⁶ cells mL⁻¹

B-1 m

PAB FLB

FLB

4.9

x 10³-1.6 x 10⁵ CFU g⁻¹ wet leaf

4.2 x 10²-1.6 x 10⁴ CFU mL⁻¹

4.6 x 10²-1.9 x 10³ CFU mL⁻¹

0 m 3.7 x

10¹-5.6 x 10³ CFU mL⁻¹ B-1 m 1.4 x 10¹-8.5 x 10² CFU mL⁻¹

0 m

B-1 m

PAB

16SrRNA

α-Proteobacteria

γ-Proteobacteria

Pseudoalteromonas

Gaciecola

Vibrio

Alteromonas

2

BLAST

16SrRNA