



UvA-DARE (Digital Academic Repository)

The effect of allometric scaling in coral thermal microenvironments

Ong, R.H.; King, A.J.C.; Kaandorp, J.A.; Mullins, B.J.; Caley, M.J.

DOI

[10.1371/journal.pone.0184214](https://doi.org/10.1371/journal.pone.0184214)

Publication date

2017

Document Version

Other version

Published in

PLoS ONE

[Link to publication](#)

Citation for published version (APA):

Ong, R. H., King, A. J. C., Kaandorp, J. A., Mullins, B. J., & Caley, M. J. (2017). The effect of allometric scaling in coral thermal microenvironments. *PLoS ONE*, *12*(10), [e0184214]. <https://doi.org/10.1371/journal.pone.0184214>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

S4 Table

List of steady-state simulation runs performed at varying water flow velocities (1-10 cm s⁻¹) exposed to sunlight of ~650 W m⁻².

Species	Laminar			Turbulent		
	L (m)	U (m/s)	Re	L (m)	U (m/s)	Re
<i>A. digitifera</i> (B)	0.0345	0.01	345	4.9	0.01	4.54×10 ⁴
	0.1725	0.002	345	-	-	-
	0.345	0.001	345	49	0.001	4.54×10 ⁴
<i>A. millepora</i> (B)	0.074	0.01	740	5.6	0.01	5.19×10 ⁴
	0.37	0.002	740	-	-	-
	0.74	0.001	740	56	0.001	5.19×10 ⁴
<i>D. labyrinthiformis</i> (M)	0.085	0.01	850	1.8	0.01	1.67×10 ⁴
	0.425	0.002	850	-	-	-
	0.85	0.001	850	18	0.001	1.67×10 ⁴
generalised massive (M)	0.011	0.01	110	3.5	0.01	3.24×10 ⁴
	0.055	0.002	110	-	-	-
	0.11	0.001	110	35	0.001	3.24×10 ⁴
<i>Fungia</i> sp. (M)	0.079	0.01	790	7.904	0.01	7.32×10 ⁴
	0.395	0.002	790	-	-	-
	0.79	0.001	790	79.04	0.001	7.32×10 ⁴
cylindrical branch (B)	0.12	0.01	1200	12	0.01	1.11×10 ⁵
	0.6	0.002	1200	-	-	-
	1.2	0.001	1200	120	0.001	1.11×10 ⁵
<i>G. aspera</i> (M)	0.01	0.01	112	4	0.01	5.19×10 ⁴
	0.05	0.002	112	-	-	-
	0.11	0.001	112	40	0.001	5.19×10 ⁴
<i>M. annularis</i> (B)	0.032	0.01	320	0.714	0.01	6.61×10 ³
	0.16	0.002	320	-	-	-
	0.32	0.001	320	7.14	0.001	6.61×10 ³
<i>M. mirabilis</i> (B)	0.0022	0.01	22	7.32	0.01	6.78×10 ⁴
	0.011	0.002	22	-	-	-
	0.022	0.001	22	73.2	0.001	6.78×10 ⁴
<i>Porites</i> sp. (M)	0.01	0.01	100	8.2	0.01	7.59×10 ⁴
	0.05	0.002	100	-	-	-
	0.1	0.001	100	82	0.001	7.59×10 ⁴
<i>S. caliendrum</i> (B)	0.015	0.01	150	5.6	0.01	5.19×10 ⁴
	0.075	0.002	150	-	-	-
	0.15	0.001	150	56	0.001	5.19×10 ⁴
<i>S. hystrix</i> (B)	0.015	0.023	230	5	0.01	4.63×10 ⁴
	0.115	0.002	230	-	-	-
	0.23	0.001	230	50	0.001	4.63×10 ⁴