

BIOfiltration and Aquaculture: an Evaluation of Hard Substrate Deployment Performance within Mariculture Developments

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Publications

- Willis K.J., E.J. Cook and M. Lozano-Fernandez (2004). First record of the caprellid amphipod, *Caprella mutica*, for the U.K. *JMBA* 84: 1027-1028
- Hughes, D.J., Cook, E.J. and Sayer, M.D.J. (2005). Biological filtration by marine invertebrates in association with the biofouling of artificial substrates. *Annual Reviews in Marine Biology and Oceanography* 43:123-172.
- Whitmarsh, D.J., E.J. Cook and K.D. Black (2005). Economic analysis of an integrated salmon-mussel aquaculture system. *Marine Policy* 74
- Angel D. 2004. *Integrated Aquaculture - Variations on the Theme of Biofiltration*. Special Publication of the Bulletin of the Aquaculture Association of Canada, edited by Thierry Chopin & Shawn Robinson, (in press)
- Flander Putrle V. & Malej A. (2004). The trophic state of coastal waters under the influence of anthropogenic sources of nutrients (fish farm, sewage outfalls). *Period. Biol.* (in press)
- Lojen S, EHUD Spanier, Anat Tsemel, Timor Katz, Noa Eden, Dror Angel (in press). $\delta^{15}N$ as a Natural Tracer of Particulate Nitrogen Effluents Released from Marine Aquaculture. *Marine Biology*
- Cook E.J., K.D.Black, M.D.J. Sayer, C.J. Cromey, D. Angel, E. Spanier, A. Tsemel, I. Karakassis, M. Tsapakis & A. Malej (in press.). Pan-European study on the influence of caged mariculture on the development of sub-littoral fouling communities. *ICES Journal of Marine Science* 63
- Tsemel, A., Spanier, E. and Angel, D. (2006). Benthic communities of artificial structures: effects of mariculture in the Gulf of Aqaba (Eilat) on development and bioaccumulation. *Bulletin of Marine Science*. 78(1):103 – 113.
- Whitmarsh, D. J., Cook, E. J. and Black, K. D. (2006). Searching for sustainability in aquaculture: An investigation into the economic prospects for an integrated salmon-mussel production system. *Marine Policy*. 30: 293-298.
- Whitmarsh, D. and wattage, P., (2006). Public attitudes towards the environmental impacts of salmon aquaculture in Scotland. *European Environment* 16:108-121.

Publications (in prep)

- Angel, D., Black, K.D. and Sayer, M.D.J. (in prep.). A review of biofiltration use in aquaculture with an assessment of potential applications for fin fish mariculture.
- Angel DL, Katz T, Eden N, Black K, Collins K, Cook E, Friedman T, Karakassis I, Lojen S, Lubinevsky H, Magill S, Makovec T, Malej A, Nevo D, Ogronov M, Ohaion D, Roitemberg A, Sabag Y, Sapir M, Sayer M, Spanier E, Thurston S, Tsapakis M, Tsemel A, Tur Caspa Y and V Turk. (in prep). Effects of net cage aquaculture on water quality in the oligotrophic subtropical Red Sea. *Aquaculture*
- Angel DL, Eden N, Katz T, Lupatsch I, Tsemel A, Spanier E. (in prep). Grazing rates and metabolism of fouling communities on artificial substrates near fish farms in the oligotrophic Gulf of Aqaba. *Marine Ecology Progress Series*

- Cook, E.J., Black, K.D., Sayer, M.D.J., Spanier, E. & Tsemel, A. (in prep). Colonisation of mussel lines suspended in waters adjacent to caged mariculture systems on the west coast of Scotland and the Gulf of Aqaba. MEPS/ Aquaculture
- Cook, E.J., Black, K.D., Cromey, C., Willis, K.D. and Sammes, P. (2004). Intensive survey of the effects of fin-fish mariculture on physico-chemical dynamics and sub-littoral marine communities. Coastal and Estuarine Science (in prep)
- Karakassis I, Tsapakis M, Pitta P (2004). Nutrients and fine particulate matter released from Sea bream (*Sparus aurata*) culture”.
- Karakassis I, Tsapakis M, Pitta P., Malej A (in prep). Study of the function of fouling communities in the vicinity of fish farms in two contrasting Mediterranean environments.
- Tsemel A, Spanier E. (in prep). Is aquaculture in the oligotrophic Gulf of Aqaba creating a ‘heterotrophic island’? Marine Ecology Progress Series.

Abstracts/ Conference Presentations

- Angel, D. (2004) "Integrated aquaculture - The Israeli/European perspective"; an oral presentation. In: *Defining the Appropriate Regulatory and Policy Framework for the Development of Integrated Multi-trophic Aquaculture Practices*. A workshop held at the Hilton Hotel, Saint John, New Brunswick, Canada, March 25-26, 2004.
- Ashton G., Willis K. & Cook E.J. Japanese skeleton shrimp, *Caprella mutica*, an alien in Scotland. British Ecological Society, September 2004.
- Ashton G., K. Willis, E.J. Cook, W. Vader, D. Tierney, Chapman, Edgar, G. Fenwick, I. Takeuchi, D. Platvoet (2004). Global distribution of the invasive marine amphipod *Caprella mutica*. (Abstract). International Aquatic Invasive Species Conference, Ennis, Ireland. 20 – 24 Sept 2004.
- Black KD, Nickell LA, Sayer MDJ, Muir H., Brand T, Cook EJ, Angel A, Katz T, Eden N, Jones KJ (2004). Chlorophyll and lipid profiles in sediments around a fish cage farm in the Gulf of Eilat, Israel. Challenger conference for marine science, Liverpool. 13-17 September.
- Cook E.J., K.D.Black, M.D.J. Sayer, C. Cromey, D. Angel, T. Katz, N. Eden, E. Spanier, I. Karakassis, M. Tsapakis & A. Malej (2004). Pan-European study on the influence of caged mariculture on the development of sub-littoral fouling communities (Abstract). Environmental issues of marine fish farming in the Mediterranean. Medveg/ Meramed/ Biofaqs Workshop. Barcelona, 20 October 2004.
- Cook, E.J., K.J. Willis & G. Aston (2004). Population dynamics & development of the invasive caprellid amphipod *Caprella mutica* (Abstract). International Aquatic Invasive Species Conference, Ennis, Ireland. 20 – 24 Sept 2004.

Courses/ Workshops

PhD course “Environmental issues of marine fish farming in the Mediterranean” organized by University of Southern Denmark and the Hellenic Centre for Marine Research, Crete, June-July 4 2004.

MedVeg Workshop “Environmental issues of marine fish farming in the Mediterranean”, Barcelona, 20 October 2004.