

Daniel Taylor Postdoctoral Researcher National Institute of Aquatic Resources  
Section for Coastal Ecology Postal address: Øroddevej 80 7900 Nykøbing Mors  
Denmark Email: dtay@aqu.dtu.dk Mobile: 93518975 Web address:  
<http://www.aqua.dtu.dk>

## Employment

### Postdoctoral Researcher

Section for Coastal Ecology, National Institute of Aquatic Resources  
Technical University of Denmark  
Nykøbing Mors, Denmark  
October 2020 → present

### PhD Fellow

Section for Coastal Ecology, National Institute of Aquatic Resources  
Technical University of Denmark  
Nykøbing Mors, Denmark  
May 2017 → October 2020

### Aquaculture Research Associate

Department of Food Science and Technology  
Virginia Polytechnic Institute and State University  
Blacksburg, VA, USA  
January 2014 → May 2017

### Senior Research Specialist

Southwest Virginia Aquaculture Research Center  
Virginia Polytechnic Institute and State University  
Blacksburg, VA, USA  
November 2010 → December 2013

### Assistant Engineer

DHI Group  
Berlin, Germany  
June 2010 → October 2010

## Education

**PhD Aquaculture and Coastal Ecology** Thesis: Mitigation Culture of Mussels: Production and Ecological Impacts  
National Institute of Aquatic Resources  
Technical University of Denmark

## Projects

### Blue mussel bed dynamics in coastal areas

Johansson, I., Nielsen, P., Saurel, C. & Taylor, D.  
15/06/2022 → 14/06/2025

### Environmental impact assessment of Danish off-coast fish farms in or nearby Natura-2000 areas (Havbrug) (39839)

Petersen, J. K., Nielsen, P., Timmermann, K., Taylor, D., Schmedes, P. S., Nielsen, M. M. & Olsen, J.  
01/11/2020 → 30/10/2022

### Feasibility of Offshore Wind Farm Areas as Multi-Use Platforms for Lower-Trophic Aquaculture

Taylor, D.  
01/07/2022 → 30/06/2023

### Mitigation Cultures of Mussels - Ecological Impact

Taylor, D., Bricker, S. B., Nielsen, T. G., Saurel, C., Nielsen, P., Petersen, J. K. & Filgueira, R.  
Samfinansieret - Andet  
01/05/2017 → 11/02/2021

### Mussel farming—mitigation and protein source for organic husbandry (MUMIPRO) (39424)

Petersen, J. K., Saurel, C., Nielsen, P., Taylor, D., Bak, F. & Nielsen, N.  
15/01/2017 → 31/12/2020

## **Mussel Mitigation Feeds and Supply System Technological Development**

Taylor, D. & Petersen, J. K.

01/10/2021 → 30/09/2024

## **New species, processes and products contributing to increased production and improved sustainability in emerging low trophic, and existing low and high trophic aquaculture value chains in the Atlantic (AquaVitae) (39642)**

Nielsen, P., Petersen, J. K., Mariani, P., Taylor, D., Saurel, C., Nielsen, N. & Bak, F.

01/06/2019 → 31/05/2023

## **Optimization of mussel mitigation cultures for fish feed in the Baltic Sea (BONUS OPTIMUS) (39449)**

Petersen, J. K., Saurel, C., Nielsen, P., Taylor, D., Bak, F. & Nielsen, N.

01/04/2017 → 31/03/2020

## **Protecting the Chesapeake Bay Aquaculture Industry from a Dynamic Carbonate Chemistry Environment**

Taylor, D.

01/09/2015 → 31/08/2017

## **Research outputs**

### **Modeling particulate waste assimilation by blue mussels within the spatial constraints of a commercial fish farm: implications for multitrophic aquaculture**

á Norði, G., Lund, I., Andreassen, B., Taylor, D., Johannesen, T. T., Jacobsen, B. & Hughes, A. D., 2023, In: *Frontiers in Marine Science*. 10, 15 p., 1236294.

### **Nutrient extraction and ecosystem impact by suspended mussel mitigation cultures at two contrasting sites**

Maar, M., Larsen, J., Schourup-Kristensen, V. & Taylor, D., 2023, In: *Science of the Total Environment*. 888, 11 p., 164168.

### **Vejledning for udpegning af områder egnet til etablering af blåmuslingebanker**

Nielsen, P., Taylor, D., Banke, T. L., Saurel, C., Holbach, A. M. & Petersen, J. K., 2023, Center for Marin Naturgenopretning. 19 p.

### **Virkemidler og tiltag til forbedring af miljø- og naturforholdene i Lillebælt**

Timmermann, K., Bruhn, A., Taylor, D., Petersen, J. K., Christensen, J., Svendsen, J. C., Dahl, K., Flindt, M., Svane, N., Canal-Vergés, P., Nielsen, P., Steinfurth, R., Banke, T. & Lange, T., 2022, Kgs. Lyngby, Denmark: DTU Aqua. 49 p. (DTU Aqua-rapport; No. 405-2022).

### **In situ characterization of benthic fluxes and denitrification efficiency in a newly re-established mussel farm**

Hylén, A., Taylor, D., Kononets, M., Lindegarth, M., Stedt, A., Bonaglia, S. & Bergström, P., 2021, In: *Science of the Total Environment*. 782, 15 p., 146853.

### **Mechanisms influencing particle depletion in and around mussel farms in different environments**

Taylor, D., Larsen, J., Buer, A. L., Friedland, R., Holbach, A., Petersen, J. K., Nielsen, P., Ritzenhofen, L., Saurel, C. & Maar, M., 2021, In: *Ecological Indicators*. 122, 17 p., 107304.

### **Study on state-of-the-art scientific information on the impacts of aquaculture activities in Europe**

Poelman, M., Temple, A. J., van den Burg, S., Petersen, J. K., Taylor, D., Hodgson, S., de Clerck, A., Owen, H., Triantaphyllidis, G. V., Payne, I., Capuzzo, E., Dalsgaard, J., Deetman, B., Ecke, M., Pousão-Ferreira, P., Gaffney, J., Garmendia, J. M., Jokumsen, A., Knöpfel, T., Lansbergen, R., & 18 others Matthes, S., Mytlewski, A., Nielsen, M. M., O'Beirn, F., Pedersen, P. B., Pelikan, J., Rakowski, M., Ramos, J., Ribeiro, L., Ruane, N. M., Rurangwa, E., Schotanus, J., Solarun, O., Szulecka, O., de Bruijn, P., Oostenbrugge, H. V., Hintzen, N. & Wakeford, R., 2021, Brussels, Belgium: European Commission. 114 p.

### **A spatial model for nutrient mitigation potential of blue mussel farms in the western Baltic Sea**

Holbach, A., Maar, M., Timmermann, K. & Taylor, D., 2020, In: *Science of the Total Environment*. 736, 18 p., 139624.

### **Beskrivelser af marine virkemidler**

Maar, M., Filippelli, R., Hasler, B., Holbach, A. M., Petersen, J. K., Petersen, L. K., Saurel, C., Taylor, D. & Termansen, M., 2020, *Marine virkemidler: Beskrivelse af virkemidlernes effekter og status for vidensgrundlag*. Bruhn, A. (ed.). Aarhus Universitet, DCE – Nationalt Center for Miljø og Energi ©, p. 14-34 21 p. (Videnskabelig rapport fra DCE - Nationalt Center for Miljø og Energi; No. 368).

### **Beskrivelser af marine virkemidler: Muslingeopdræt**

Maar, M., Filippelli, R., Hasler, B., Holbach, A. M., Petersen, J. K., Petersen, L. K., Saurel, C., Taylor, D., Termansen, M. & Timmermann, K., 2020, *MARINE VIRKEMIDLER: Beskrivelse af virkemidlernes effekter og status for vidensgrundlag*. Aarhus, Danmark: Aarhus Universitet, DCE – Nationalt Center for Miljø og Energi ©, p. 14-34 21 p. (Videnskabelig rapport fra DCE - Nationalt Center for Miljø og Energi; No. 368).

### **Mitigation Culture of Mussels: Production and Ecological Impacts**

Taylor, D., 2020, Nykøbing Mors, Denmark: DTU Aqua. 259 p.

### **Nitrogen and Phosphorous Content in Blue Mussels (*Mytilus spp.*) Across the Baltic Sea**

Buer, A-L., Taylor, D., Bergström, P., Ritzenhofen, L. & Klemmstein, A., 2020, In: *Frontiers in Marine Science*. 7, 7 p., 705.

### **Policy guidelines for implementation of mussel cultivation as a mitigation measure for coastal eutrophication in the Western Baltic Sea**

Petersen, J. K. (ed.), Taylor, D. (ed.), Bergström, P., Buer, A-L., Darecki, M., Filippelli, R., Gren, I-M., Hasler, B., Holbach, A. M., Nielsen, P., Petersen, L. K., Lindegarth, M., Lund, I., Maar, M., Ritzenhofen, L., Sagan, S., Saurel, C., Schernewski, G., Stybel, N. & Timmermann, K., 2020, DTU Aqua. 32 p. (DTU Aqua-rapport; No. 362-2020).

### **Spatial modelling of mussel farm production and nutrient mitigation potential in the W Baltic Sea**

Maar, M., Holbach, A. M., Timmermann, K. & Taylor, D., 2020.

### **Evaluating chlorophyll depletion in mitigation mussel cultivation at multiple scales**

Petersen, J. K., Loo, L-O. & Taylor, D., 2019, In: *Aquaculture Environment Interactions*. 11, p. 263-278

### **Marine Gardens**

Taylor, D., 2019, In: *Coastal & Marine*. 28, 1, p. 22-22

### **Optimal Production Modes and a Tool to Compensate for Finfish Aquaculture Production in Denmark**

Nielsen, P. & Taylor, D., 2019, In: *Coastal & Marine*. 28, 1, p. 4-6

### **Optimizing Production of Mitigation Mussels**

Taylor, D., Saurel, C., Nielsen, P., Bak, F., Nielsen, N-P. & Petersen, J. K., 2019. 1 p.

### **Production Characteristics and Optimization of Mitigation Mussel Culture**

Taylor, D., Saurel, C., Nielsen, P. & Petersen, J. K., 2019, In: *Frontiers in Marine Science*. 6, 698.

### **Production characteristics of mitigation mussel culture**

Taylor, D., Saurel, C., Petersen, J. K., Nielsen, P., Bak, F. & Nielsen, N-P., 2019.

### **Spatial modelling and development of a multi-criteria site selection tool for mussel farms as a mitigation measure in eutrophic Danish coastal waters**

Holbach, A. M., Maar, M., Timmermann, K., Göke, C. & Taylor, D., 2019, 20. *Danske Havforskermøde Abstractkatalog*. Syddansk Universitetsforlag, p. 193-193 1 p.

### **Spatial Modelling of Blue Mussel Farm Production Potential in the Western Baltic Sea**

Maar, M., Holbach, A. M., Timmermann, K. & Taylor, D., 2019, *Aquaculture Europe 2019, Berlin: Our Future Growing from water*. p. 830-831

**Transforming Excess Nutrients in Coastal Waters to Marine Protein for Feeds: Eutrophication and the struggle to control nutrient loss**

Taylor, D. & Petersen, J. K., 2019, In: International Aquafeed. p. 20-22

Nitrogen removal from water of recirculating aquaculture system by a microbial fuel cell

Zou, S., Guan, L., Taylor, D. P., Kuhn, D. & He, Z., 1 Dec 2018, In: Aquaculture. 497, p. 74-81

**Bivalve gardening**

Saurel, C., Taylor, D. P. & Tretault, K., 2018, *Goods and Services of Marine Bivalves*. Smaal, A. C., Ferreira, J. G., Grant, J., Petersen, J. K. & Strand, Ø. (eds.). Springer, p. 355-380

**Nährstoffrecycling durch Aquakultur**

Taylor, D. & Nielsen, P., 2018, In: Meer & Küste . 7, p. 12-13

Production of omega-3 enriched tilapia through the dietary use of algae meal or fish oil: Improved nutrient value of fillet and offal

Stoneham, T. R., Kuhn, D. D., Taylor, D. P., Neilson, A. P., Smith, S. A., Gatlin, D. M., Chu, H. S. S. & O'Keefe, S. F., 2018, In: P L o S One. 13, 4, e0194241.

**Adsorptive performance of granular activated carbon in aquaculture and aquaria: a simplified method**

Taylor, D., Kuhn, D. D. & Smith, S., 2017, In: Journal of Applied Aquaculture. 29, 3-4, p. 291-306

Bacillus as probiotics for aquaculture species

Drahos, D., D'Imperio, S., Heffron, J., Kuhn, D. D. & Taylor, D. P., 2017.

Characterizing the carbonate chemistry environment in the Chesapeake Bay: Focus on shellfish hatcheries

Kuhn, D. D., Salisbury, J., Taylor, D. P., Shadwick, E., Hudson, K., Erskine, A. J., Wesson, J., Warren, J. & Scott, D., 2017

Developing a protocol for testing low phytic acid soy meal based feed on Pacific white shrimp

Averitt, B. J., Taylor, D. P., Kuhn, D. D. & Zhang, B., 2017, In: International Journal of Environment & Agricultural Science. 1, 001.

Direct-fed probiotics enhance survival of shrimp exposed to an early mortality syndrome-causing strain of *Vibrio parahaemolyticus*

Drahos, D. J., Choi, M., Taylor, D., Stevens, A. M., Smith, S. A. & Kuhn, D. D., 2017.

Direct-fed probiotics improve survival in shrimp, *Litopenaeus vannamei*, under AHPND/EMS challenge

Taylor, D. P., Stevens, A. M., Choi, M., Drahos, D., D'Imperio, S., Smith, S. A., Heffron, J. & Kuhn, D. D., 2017.

Enhancing seafood quality and safety by reducing reliance on antibiotics: Applying a novel antibody in *Tilapia*

Garry, J. N., Kuhn, D. D., Schwarz, M. H., Smith, S. A., Taylor, D. P., Blackistone, B., Butz, D. E. & Cook, M. E., 2017.

**Optimization of mitigation mussel culture for nutrient extraction and animal feedstock replacement: An introduction.**

Taylor, D., Saurel, C., Nielsen, P. & Petersen, J. K., 2017. 2 p.

Ozone application in aquaculture

Kuhn, D. D., Smith, S. A., Scott, D. T. & Taylor, D. P., 2017, In: Virginia Cooperative Extension Publications. FST-244P.

Adsorptive performance evaluation of granular activated carbon in aquaculture and aquaria: A succinct method

Taylor, D. P., Kuhn, D. D. & Smith, S. A., 2016.

Application of Direct-Fed Probiotics to improve survival in shrimp and reduce pathogenicity of EMS/AHPND bacteria  
Taylor, D. P., Stevens, A. M., Choi, M., Drahos, D., D'Imperio, S. & Kuhn, D. D., 2016.

Effects of direct-fed probiotics and disease-induced stress on the Metabolome of fish  
Kuhn, D. D., Taylor, D. P., Smith, S. A. & Drahos, D., 2016.

Evaluation of bioflocs derived from confectionary food effluent water as a replacement feed ingredient for fishmeal or soy meal for shrimp  
Kuhn, D. D., Lawrence, A. L., Crockett, J. & Taylor, D. P., 2016, In: *Aquaculture*. 454, p. 66-71

Hepatocellular injury and regeneration of the liver associated with Microcystin-Lr exposure in Tilapia, *Oreochromis Sp.*  
James-Yi, S., Khoo, L. H., Jortner, B. S., Murphy, L. A., Kuhn, D. D., Taylor, D. P. & Smith, S. A., 2016.

Influence of a novel probiotic candidate on immunity and disease resistance of *Pangasius hypophthalmus*  
Galagarza, O. A., Kuhn, D. D., Smith, S. A., Taylor, D. P., Eifert, J. D. & Williams, R. C., 2016.

Production of Omega-3 rich Tilapia through the use of a commercially available seaweed blend  
Stoneham, T., Kuhn, D. D., Taylor, D. P., O'Keefe, S. F., Nielsen, A. P., Smith, S. A. & Gatlin, D. M., 2016.

Protocols and market opportunities for shipping live shrimp in waterless conditions  
Taylor, D. P., Kuhn, D. D., Hanson, T. & Lawson, L., 2016.

Strain and dose infectivity of *Vibrio parahaemolyticus*: The causative agent of early mortality syndrome in shrimp  
Choi, M., Stevens, A. M., Smith, S. A., Taylor, D. P. & Kuhn, D. D., 2016, (E-pub ahead of print) In: *Aquaculture Research*.

Waterless shipment of warm water shrimp  
Kuhn, D. D. & Taylor, D. P., 2016, In: *Virginia Cooperative Extension Publications*. FST-245P.

Applications of direct fed microbes in aquaculture  
Drahos, D., Kuhn, D. D. & Taylor, D. P., 2015.

Clinical signs and liver pathology associated with Microcystin-LR exposure in Tilapia, *Oreochromis sp.*  
Smith, S. A., James-Yi, S., Khoo, L. H., Jortner, B. S., Murphy, L. A., Kuhn, D. D. & Taylor, D. P., 2015.

Direct fed probiotics improves fish physiology: gut health and other factors  
Kuhn, D. D., Taylor, D. P., Smith, S. A. & Drahos, D., 2015.

Improving disease resistance for shrimp through application of probiotics in feed  
Choi, M., Stevens, A., Taylor, D. P., Drahos, D., Smith, S. A. & Kuhn, D. D., 2015.

Live shipping of shrimp and prawns in waterless conditions  
Taylor, D. P. & Kuhn, D. D., 2015.

Monitoring carbonate chemistry in the Chesapeake Bay: importance to shellfish hatcheries  
Kuhn, D. D., Salisbury, J., Hudson, K., Erskine, A. J., Warren, B., Capson, T. & Taylor, D. P., 2015.

Ocean acidification – potential threat to Virginia's shellfish industry  
Kuhn, D. D., Scott, D., Salisbury, J., Hudson, K., Shadwick, E. & Taylor, D. P., 2015.

Accumulation and loss of critical elements in shrimp RAS  
Kuhn, D. D., Lawrence, A., Crocket, J. & Taylor, D. P., 2014.

Effects of a probiotic diet on Tilapia in Recirculating Aquaculture Systems  
Taylor, D. P., Kuhn, D. D., Smith, S. & Drahos, D., 2014.

Tobacco dust: A novel molluscicide for aquaculture applications  
Kuhn, D. D., Smith, S. A., Mainous, M. E. & Taylor, D. P., 2014, In: Aquacultural Engineering. 63, p. 25-31

Toxicity of tobacco dust to freshwater snails (*Planorbella trivolvis*) and channel catfish (*Ictalurus punctatus*)  
Kuhn, D. D., Smith, S. A., Mainous, M. E. & Taylor, D. P., 2014, In: Aquacultural Engineering. 60, p. 14-19

Use of recent practical molecular tools for confirmation of beneficial microbes in aquaculture  
Drahos, D., D'Imperio, S., Kuhn, D. D. & Taylor, D. P., 2014.

Culturing oysters in zero-exchange systems using synthetic seawater, calcium supplementation, and shrimp waste as feed  
Kuhn, D. D., Taylor, D. P. & Angier, M. A., 2013.

Effects of potassium levels on shrimp, *Litopenaeus vannamei*, in recirculating aquaculture systems  
Taylor, D. P. & Kuhn, D. D., 2013.

Organic molluscicide options for catfish and freshwater pond farmers.  
Kuhn, D. D., Smith, S. A., Taylor, D. P. & Mainous, M. E., 2013.

Evaluating the microbiological quality of butterhead lettuce and basil produced using Aquaponics  
Waitt, J. A., Grant, A., Taylor, D. P., Kuhn, D. D., Welbaum, G. E. & Ponder, M. A., 2012.

**Evaluating the microbiological quality of butterhead lettuce and basil produced using Aquaponics**  
Waitt, J. A., Grant, A., Taylor, D. P., Kuhn, D. D., Welbaum, G. E. & Ponder, M. A., 2012.