Who are we?

Seahorse Work Group

CCMAR
Centre of Marine Sciences of Algarve

Fisheries Biology and Hydroecology Group

The Team

José Pedro Andrade

Jorge Palma

Miguel Correia

... and of course, passing students

The species

Hippocampus guttulatus

Hippocampus hippocampus

The research goals

The study of the Ria Formosa seahorse populations

Seahorse captive breeding program

Contents lists available at ScienceDirect

Regional Studies in Marine Science

journal homepage: www.elsevier.com/locate/rsma

A novel underwater visual census: Seahorse population survey as a case study

Miguel Correia [a,*], Heather Koldewey [b], José Pedro Andrade [a], Jorge Palma [a]

Journal of FISH BIOLOGY

fsbi

Seahorse (Hippocampinae) population fluctuations in the Ria Formosa Lagoon, south Portugal

M. Correia*†, I. R. Caldwell‡, H. J. Koldewey§, J. P. Andrade* and J. Palma*

Contents lists available at ScienceDirect

Journal of Experimental Marine Biology and Ecology

journal homepage: www.elsevier.com/locate/jembe

Can artificial holdfast units work as a habitat restoration tool for long-snouted seahorse (*Hippocampus guttulatus* Cuvier)?

Miguel Correia [a,*], Jorge Palma [a], Heather Koldewey [b], José Pedro Andrade [a]

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Contents lists available at ScienceDirect

Journal of Experimental Marine Biology and Ecology

journal homepage: www.elsevier.com/locate/jembe

Effects of artificial holdfast units on seahorse density in the Ria Formosa lagoon, Portugal

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Journal of FISH BIOLOGY

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The use of a non-invasive tool for capture–recapture studies on a seahorse *Hippocampus guttulatus* population

M. Correia*†, J. Palma*, H. Koldewey‡ and J. P. Andrade*

Environ Biol Fish (2018) 101:1357–1367
https://doi.org/10.1007/s10641-018-0782-7

CrossMark

Identifying key environmental variables of two seahorse species (*Hippocampus guttulatus* and *Hippocampus hippocampus*) in the Ria Formosa lagoon, South Portugal

Miguel Correia · Heather Jane Koldewey · José Pedro Andrade · Eduardo Esteves · Jorge Palma

Palma, J., Magalhães, M., Correia, M., Andrade J.P., Effects of anthropogenic noise as a source of acoustic stress in wild populations of *Hippocampus guttulatus* in the Ria Formosa, South Portugal. *Accepted* in Aquatic Conservation: Marine and Freshwater Ecosystems.

Future topics (so we hope...)

- Maintain seasonal population surveys

- To fully evaluate the direct and indirect anthropogenic causes responsible for population decline, including habitat fractioning, degradation and potential climate change effects;

- To access the ecological role of seahorse populations in the lagoon in a prey-predator relationship;

- To test the usefulness of re-stocking practices and establishment of seahorse Marine Protected Areas;

- To thoroughly map the still existing seahorse habitats and engage it with up coming conservation actions;

- Engagement of stakeholders and local community through ocean literacy for marine biodiversity and conservation.

Contents lists available at ScienceDirect

Aquaculture

journal homepage: www.elsevier.com/locate/aqua-online

Growth and survival of adult long snout seahorse (*Hippocampus guttulatus*) using frozen diets

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JOURNAL OF THE WORLD AQUACULTURE SOCIETY

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Growth, Reproductive Performances, and Brood Quality of Long Snout Seahorse, *Hippocampus guttulatus*, Fed Enriched Shrimp Diets

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DOMINIQUE P. BUREAU

Contents lists available at ScienceDirect

Aquaculture

journal homepage: www.elsevier.com/locate/aqua-online

Effect of different *Artemia* enrichments and feeding protocol for rearing juvenile long snout seahorse, *Hippocampus guttulatus*

Jorge Palma [a,*], Dominique P. Bureau [b], José P. Andrade [a]

Aquaculture Nutrition

The impact of dietary supplementation with astaxanthin on egg quality and growth of long snout seahorse (*Hippocampus guttulatus*) juveniles

J. PALMA[1], J.P. ANDRADE[1] & D.P. BUREAU[2]

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Fish Physiol Biochem
DOI 10.1007/s10695-013-9881-8

The effect of diet on ontogenic development of the digestive tract in juvenile reared long snout seahorse *Hippocampus guttulatus*

J. Palma · D. P. Bureau · J. P. Andrade

Project HIPPONUTRE

"Breeding long snout seahorse, *Hippocampus guttulatus*: Zootechnical optimization and nutritional requirements evaluation"
(MAR2020: HIPPONUTRE 16-02-01-FMP-0054)

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Fundo Europeu dos Assuntos Marítimos e das Pescas

To determine the paternal nutrient provisioning to embryos in long snout seahorse (*Hippocampus guttulatus*)

Digestibility, protein utilization and lysine supplementation in the amino acid metabolism of juvenile long snout seahorse

Digestibility and protein utilization by juvenile long snout seahorse

Effect of lysine supplementation in the amino acid metabolism of juvenile long snout seahorse

Dietary fatty acid metabolism in long snout seahorse

Dietary DHA and EPA metabolism in *H. guttulatus*

Effects of dietary arachidonic acid on juvenile performance, fatty acid profiles, stress resistance in *H. guttulatus*

To develop an optimized *Artemia* enrichment nutritionally fit for juvenile seahorses