

Presentation

Name: Mendes Gonçalves, Rui Alexandre

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Personal Information

Date of Birth: 20/06/1982

Place of Birth: Santa Cruz (Autonomous Region of Madeira, Portugal)

Gender: Male

Academic Qualifications

09/2007 – 09/2009 MSc. in Aquaculture and Fisheries, Aquaculture specialization. University of Algarve, Faro (Portugal). Final classification: 16 (scale: 0-20).

Principal subjects: Larvae rearing, Live Food Production, Pathology, Aquaculture Engineering, Aquaculture Nutrition, Fresh Water Aquaculture, Genetic and selection and Reproduction.

Thesis: "Determination of dietary docosahexaenoic acid (DHA) requirements for Senegalese sole (*Solea senegalensis*) post-larvae." (Supervisors: Luis Conceição, Senior Researcher; Dulce Martins, Ph.D.)

10/2001 – 07/2006 BSc. in Marine Biology and Biotechnology, Superior school of Maritime Technology, Polytechnic Institute of Leiria, Portugal. Final classification: 14 (scale: 0-20)

Thesis: "*Sparus aurata* larvae development" (Supervisors: Lurdes Morgado, MSc. OesNor Hatchery Manager; Ana Pombo, MSc.)

Principal subjects:

Aquaculture and Fisheries

- Aquatic Production techniques, Aquaculture, Pathology, Marine Ecosystems, Animal physiology

Marine Biotechnology

-Dynamics and process control, Food Technology, Food Biotechnology, Quality Control (HACCP) in Marine Processes

Earlier experience

01-07-2009 – Ongoing Research technician on the project “On the metabolism of the European cuttlefish, *Sepia officinalis* (Linnaeus, 1758)”.

My main activities on this project has been to capture live food (grass shrimp, *Palaemonetes* sp.) to feed cuttlefish, to develop the experiment “Early weaning of cuttlefish (*Sepia officinalis*) with dead grass shrimp (*Palaemonetes varians*) from the first day after hatching” and to write a scientific paper and poster about this experiment. I also have been organizing the bibliographic cephalopod database.

01-06-2009 – 30-09-2009 Development of the Master’s thesis on the “Determination of dietary docosahexaenoic acid (DHA) requirements for Senegalese sole (*Solea senegalensis*) post-larvae”.

During this period I’ve acquired experience on radioactive tube-feeding methods, “dose-response” growth and radiolabelled (¹⁴C) *Artemia* intake trials, and weaning experiments.

26-03-2009 – 29-05-2009 Northwest Atlantic Fisheries Organization (NAFO) Observer

During the time that I was on board of the Trawl fishery vessel, I had to identify all the captured fish, to observe and register all the fishing events (net size, net appendix, time and duration of trawl, GPS position, and depth of trawl) and fish processing, and to provide daily reports to the EU authorities.

16-03-2009 – 20-03-2009 Voluntary work (Hatchery Technician) at the Viveiros Vila Nova, S.A hatchery (Vila Nova de Mil Fontes)

During this period my main activities was helping to identify and chip tag the *Sparus aurata* broodstock, to verify sex ratios of the broodstock, and sea bass and sea bream larvae rearing.

20-09-2006 – 05-01-2009 Person-in-charge of the weaning section and deputy-manager for the larval section at TiMar sea bream hatchery (TiMar, Culturas em Água S.A. Sítio dos Ilhéus, Livramento Luz-8800 Tavira)

On the larvae rearing section my main responsibilities were:

- Egg collection, disinfection, and incubation. Larvae rearing, including staff management.
- To study the light influence on larval survival and rate of deformities;
- To study an optimized use of *Artemia* and its replacement for inert diets;
- To study the possibility of performing a sea bream early weaning at 10DAH.

On the weaning section my functions were:

- To manage weaning in terms of activities to be performed (e.g. grading, swim-bladder control, fish transfer, etc.) and staff.
- To study an optimized use of *Artemia* and its replacement for inert diets;
- Adaptation and innovation of the techniques used which allowed a decrease in production costs (mainly with *Artemia*).

10-05-2006 – 25-06-2006
and
20-02-2007– 29-04-2007

Person-in-charge for the CRAFT- Shallow-raceway high density rearing study at TiMar with the main collaboration of Victor Øiestad (AKVAPLAN-NIVA).

During these two periods, my main functions were to test the best inert food to be use with this type of tanks. Other tasks included feeding the fish with chosen feed, problem prevention and solution (e.g. bubble disease, water failures, etc), to monitor and maintain water parameters (namely, temperature, ammonia, pH and oxygen), fish sampling (size and weight) and to write weekly and final reports of activities.

06-02-2006 - 12-06-2006 Traineeship at the OesNor sea-bream and sea-bass hatchery (Peniche)

The objective of this traineeship was to report similarities between OesNor culture techniques and existing literature. I was integrated in the daily routines of the larval section. In here, I gained experience on cleaning tanks, water parameter monitoring, larvae feeding, applying the green water methodology and on verifying larval evolution (by measuring total length, organ development, and total weight).

01-10-2004 - 31-12-2004 Voluntary work at the OesNor sea-bream and sea-bass hatchery (Peniche).
Mainly Zoo and Phytoplankton

During these 3 months, I acquired experience on the production of auxiliary trophic chain phyto and zooplankton. I was integrated on the daily routines of food production and learned how to produce microalgae and zooplankton, namely rotifers (*Brachionus* sp.) and *Artemia*. In addition, I participated in feed enrichment and bio-encapsulation.

Fields of Expertise

- Live Food** Rotifers and *Artemia* production (tanks densities, inoculums calculation, tanks preparations, filtration, feed and enrichment and encapsulation (*Artemia*)).
- Microalgae production (from inoculums to big volumes).
- Fish Husbandry** Identify and chip tag the *Sparus aurata* broodstock, to verify sex ratios of the broodstock
- Egg collection, disinfection, and incubation
- Larvae rearing
- Post-larvae rearing
- Eggs, larvae and post-larvae transport, use of anesthetic, good knowledge of use antibiotics and others prophylactic agents,
- Nutrition** Acquaintance with the tube-feeding technique;
- Knowledge about *Artemia* radiolabelled (^{14}C) intake test;
- Emulsions preparations (mainly emulsions with different concentrations of DHA);
- Experience on testing different types of inert feeds to obtain the best weaning (on *Sparus aurata*)
- Experience on early weaning *Saparus aurata* larvae's.

Management Capable of organize an entire larvae production cycle (since live food request until human resources need)

Total competent organizing larvae transference and weaning procedure (*Artemia* request, inert food request (with different sizes), grading, swimblader test, routine work, etc).

Capable of organize and run an experimental work

Courses and additional Skills

2010	Certificate on Animal experimentation by Portuguese Veterinary Department
2006	Coastal Skipper
2005	PADI Advanced Open Water Diver
Driving License	Category A and B
Other skills and competences	General knowledge on maintenance of water bombs, ultra-violets, filters, small arrangements in fiber glass and pvc
Computer skills and competences	Competent with all Microsoft Office pack (excel, power point, word), statistic programs SPSS, SigmaSat and Sigmaplot. Bibliographic databases: endnote and mendell. Well acquainted with internet and image programs. Knowledge on program imagetool (to measure digital objects, e.g. larvae photos)

Spoken Languages

Mother tongue: **Portuguese**

Other languages

	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken production	
English	Proficient user	Proficient user	Independent user	Independent user	Proficient user
Spanish	Proficient user	Proficient user	Basic user	Basic user	Independent user

Last Conference Participations

15 and 16 April 2010	V Meet of Aquaculture from south Spain - The excellent production on pounds. Cartaya – Huelva, Spain
13 and 14 March 2010	Portuguese conference of Malacology 2010. Faro, Portugal
16/11/2009 – 18/11/2009	International meeting on Marine Resources. Peniche, Portugal

Publications

Thesis

- **Gonçalves, R.A. (2010).** "Determination of dietary docosahexaenoic acid (DHA) requirements for Senegalese sole (*Solea senegalensis*) post-larvae" Dissertação apresentada à Universidade do Algarve para obtenção do grau de Mestre em Aquacultura e Pescas, especialidade de Aquacultura, 64p.
- **Gonçalves, R.A. (2006).** "*Sparus aurata* larvae development" Dissertação apresentada à Escola Superior de Tecnologias do Mar, Instituto Politécnico de Leiria para obtenção do grau de licenciado em Biologia Marinha e Biotecnologia, 80p.

Communications in Conferences

- **SYKES, A.V., GONÇALVES, R.A. & ANDRADE, J.P. (2010).** "Early weaning of cuttlefish (*Sepia officinalis*) with dead grass shrimp (*Palaemonetes varians*) from the first day after hatching". Poster presented at the Congresso Português de Malacologia 2010, held at CCMAR, Universidade do Algarve between the 13th and 14th March 2010.
- **SYKES, A.V., GONÇALVES, R.A. & ANDRADE, J.P. (2010).** "Early weaning of cuttlefish (*Sepia officinalis*) with dead grass shrimp (*Palaemonetes varians*) from the first day after hatching". Poster presented at the V Jornadas de Acuicultura en el Litoral SurAtlántico, held at Cartaya, Huelva (Spain) between the 15th and 16th April 2010.
- **SYKES, A.V., GONÇALVES, R.A. & ANDRADE, J.P. (2010).** "Early weaning of cuttlefish (*Sepia officinalis*) with dead grass shrimp (*Palaemonetes varians*) from the first day after hatching". Poster presented at Aquaculture Europe 2010 held at Porto, Portugal, October 2010.

Projects:

- 2010-2012 - Project "SEPIAMETA - On the metabolism of the European cuttlefish, *Sepia officinalis* (Linnaeus, 1758)". Fundação para a Ciência e Tecnologia - PTDC/MAR/102348/2008 – member of team.
- 2009– 2010 - Project "ASSEMBLE: Association of european marine biological laboratories". Grant agreement no.: 227799 FP7. Participation on the suitability of the European cuttlefish (*Sepia officinalis*) as a research animal model – member of team