

IOANNIS LERIS

Curriculum Vitae

(November 2018)

Contact details

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Personal information

Date of birth

23 October 1983

Place of birth

Agrinio, Greece

Nationality

Greek

Education

November 2010 – September 2016

PhD in Behavioural Biology – Utrecht University and Helmholtz Institute (part of the research was conducted in McGill University).

October 2006 – October 2008

MSc in Environmental Biology, Management of terrestrial and marine biological resources – University of Crete (Grade “Excellent” 9.48/10).

October 2001 – September 2006

BSc in Biology – University of Crete (Grade “Very Good” 6.87/10).

September 1998 – June 2001

Arsakeio Lykeio Psychikou High-school (Grade “Excellent” 18.1/20).

Languages

Greek: Mother tongue.

English: Excellent (Certificate of Proficiency in English, University of Cambridge, June 2003).

German: Good (Zeugnis Zentrale Mittelstufenprüfung, Goethe Institut, August 2000).

Experience

Research

October 2010 – 2016: S. M. Reader's Lab, Department of Biology and Helmholtz Institute, Utrecht University, Utrecht, The Netherlands, and McGill University, Montreal, Quebec, Canada.

I first studied shoaling (grouping) behaviour and memory of shoal locations in guppies. I also examined the consistency and heritability of shoaling tendencies and social learning propensities. My main research focus was studying how early environment cues (social cues, predation risk and conspecific density) influence an individual's reliance on social information as well as other aspects of its behavioural phenotype (grouping, exploratory behaviour, boldness and risk-avoidance). I also measured the behavioural responses of fish exposed to predator cues and studied population differences in shoaling behaviour and familiarity in the field.

2004 – 2009: M. Kentouri's Aquaculture Lab, Biology Department, University of Crete, Heraklion, Greece.

I participated in various research projects that involved the observation and discrimination of a variety of possible skeletal abnormalities in Mediterranean finfish. I mainly studied the effects of environmental factors (temperature and photoperiod) on sex differentiation and the effects of rearing temperature on fish morphology (body shape, malformations and meristic characters) and physiology (swimming performance and metabolism). I also worked on abnormalities of the lateral line in Mediterranean farmed species and conducted 3D-Imaging of these species for ontogeny of the digestive system and skeletal structure.

Participation in research programmes

2018 – today: Monitoring and recording of the status (quality, quantity, pressures and uses) of surface waters of Greece ('YMEPERAA'). Funding: Ministry of Environment. Principal Investigator: Dr. E. Dimitriou. Duties: Participation in the field samplings (fish, macroinvertebrates and water samples), the analysis of the data and the preparation of the project deliverables.

2010 – 2014: Behavioural Flexibility: The causes and consequences of social learning and innovation (BEHFLEX). Funding: Utrecht University Stimulus Grant. Principal Investigator: Dr. S. M. Reader. Duties: Participation in the research project for my PhD thesis in the Animal Behaviour laboratory of Utrecht University and McGill University.

2009 – 2011: Swimming differentiation between male and female individuals of Zebrafish (Danio rerio, Hamilton 1822) Research Committee of the University of Crete. Funding: Research Committee of the University of Crete. Principal Investigator: Prof. M. Kentouri. Duties: Participation in the research project for my MSc thesis in the Aquaculture laboratory of University of Crete.

2008 – 2010: Effect of rearing temperature in the swimming activity and the metabolism of lactate in Zebrafish (Danio rerio, Hamilton 1822). Funding: Research Committee of the University of Crete. Principal Investigator: Prof. M. Kentouri. Duties: Participation in the research project in the Aquaculture laboratory of University of Crete during my postgraduate studies.

2007 – 2010: Sixth Framework Program (Priority FP6-2005-SSP5A): Sustainable extensive and semi-intensive coastal aquaculture in Southern Europe (SEACASE). Funding: E.E. Scientific Coordinator: Dr. B. Chatain. Principal Investigator: Prof. M. Kentouri. Duties: Participation in the research project in the Aquaculture laboratory of University of Crete during my postgraduate studies.

2004 – 2006: Influence of environmental factors on Zebrafish, *Danio rerio* (Hamilton, 1822) sex determination. Differentiation of reproductive and central neural systems. *Funding:* Ministry of Education ('PYTHAGORAS'). *Scientific Coordinator:* Prof. M. Kentouri. *Duties:* Participation in the research project in the Aquaculture laboratory of University of Crete during my undergraduate studies.

Short-term projects

September 2007 – February 2008

Aquaculture Lab, University of Crete (supervised by prof. Maroudio Kentouri): Morphological deformities of the lateral line in intensively reared gilthead sea bream (*Sparus aurata* L.).

June – August 2007

Hellenic Centre of Marine Research (supervised by dr. Stavros Chatzifotis): Industrial food preferences in farmed common dentex (*Dentex dentex*).

February – June 2007

Natural History Museum of Crete (supervised by dr. Apostolos Trichas): Phylogeography of the genus *Dendarus* in the Cretan area, with the use of molecular techniques.

Fieldwork

June 2013

I studied population differences in shoaling and familiarity in wild guppies, in the Northern Mountain Range of Trinidad and Tobago, and collected wild specimens for the establishment of lab populations back in McGill.

February – March 2018

I participated in water samplings (chemical and physicochemical parameters) in various river systems of Greece for the 'YMEPERAA' research programme.

March – April & August – September 2018

I participated in fish samplings using electrofishing equipment (backpack batteries and bankside generators) in various river systems of Greece for the 'YMEPERAA' research programme.

Teaching & supervising

January 2012 – July 2012

Supervision of M. Atienza Alonso who conducted a 6-month internship on 'Heritability of social learning propensities and shoaling tendency in guppies (*Poecilia reticulata*)' in Utrecht University.

April 2011 – December 2012

Supervision of E. Robot who conducted a 9-month internship on 'Individual consistency of social learning and shoaling behaviour in guppies (*Poecilia reticulata*)' in Utrecht University.

June – July 2011

Supervision of two student groups for the masters course 'Cognition and Behaviour' in Utrecht University.

February – June 2008

Demonstrator in the undergraduate 'Plant Structure' practical course in University of Crete.

September – December 2007

Demonstrator in the undergraduate 'Introduction to Zoology' practical course in University of Crete.

Reviewing

I have reviewed articles for 'Behavioural Processes' and 'Journal of Fish Biology', and I am a member of Peerage of Science (www.peerageofscience.org).

Other experience

November 2008 – November 2009

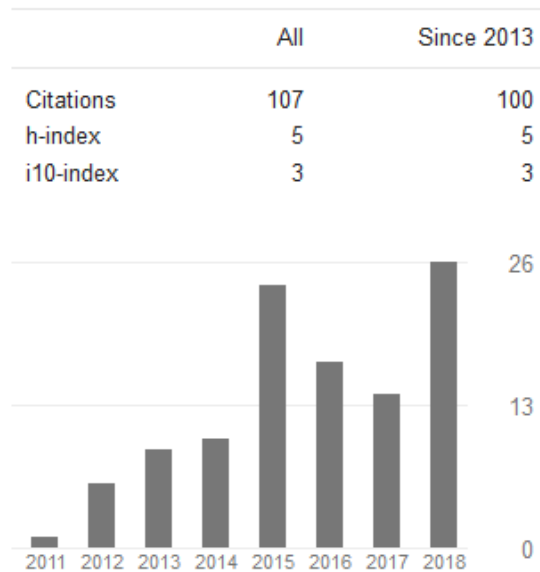
12-month mandatory military service in the Medical Corps of the Greek Army in Arta, Kos and Athens, Greece, where I was trained as a Microbiology lab assistant.

Publications

1. Reddon, A. R., Chouinard-Thuly, L., **Leris, I.**, & Reader, S. M. (2018). Wild and laboratory exposure to cues of predation risk increase relative brain mass in male guppies. Accepted for publication in *Functional Ecology*.
2. Chouinard-Thuly, L., Reddon, A.R., **Leris, I.**, Earley, R.L., & Reader, S. M. (2018). Developmental plasticity of the stress response in female but not male guppies. *Royal Society Open Science*, 5, 172268.
3. **Leris, I.**, & Reader, S. M. (2016). Age and early social environment influence guppy social learning propensities. *Animal Behaviour*, 120, p. 11–19.
4. Reader, S. M., & **Leris, I.** (2014). What shapes social decision making? *Behavioral and Brain Sciences*, 37, 96–97.
5. **Leris, I.**, Sfakianakis, D. G., & Kentouri, M. (2013). Are zebrafish *Danio rerio* males better swimmers than females? *Journal of Fish Biology*, 83, p. 1381–1386.
6. Sfakianakis, D. G., **Leris, I.**, & Kentouri, M. (2012). Exercise-related muscle lactate metabolism in zebrafish juveniles : The effect of early life temperature. *Italian Journal of Zoology*, 79, p. 568–573.
7. Sfakianakis, D. G., **Leris, I.**, Mylonas, C. C., & Kentouri, M. (2012). Temperature during early life determines sex in zebrafish, *Danio rerio* (Hamilton, 1822). *Journal of Biological Research*, 17, p. 68–73.
8. Sfakianakis, D. G., **Leris, I.**, Laggis, A., & Kentouri, M. (2011). The effect of rearing temperature on body shape and meristic characters in zebrafish (*Danio rerio*) juveniles. *Environmental Biology of Fishes*, 92, p. 197–205.
9. Sfakianakis, D. G., **Leris, I.**, & Kentouri, M. (2011). Effect of developmental temperature on swimming performance of zebrafish (*Danio rerio*) juveniles. *Environmental Biology of Fishes*, 90, p. 421–427.

Article Impact Factors (2016) and citation records.

Article	Journal	Impact Factor	Citations
1.	Functional Ecology	5,21	-
2.	Royal Society Open Science	2,243	3
3.	Animal Behaviour	2,869	6
4.	Behavioral and Brain Sciences	14,2	3
5.	Journal of Fish Biology	1,519	9
6.	Italian Journal of Zoology	0,921	2
7.	Journal of Biological Research	1,2	17
8.	Environmental Biology of Fishes	1,255	45
9.	Environmental Biology of Fishes	1,255	21



From Google Scholar: <https://scholar.google.com/citations?user=4X0Wt64AAAAJ>

Submitted or in preparation

- **Leris, I.**, & Reader, S. M. Individual consistency in shoaling behaviour in male guppies, *Poecilia reticulata* (in preparation).

Dissertations

Leris, I. (2016). Early environment and the development of social behaviours in the Trinidadian guppy, *Poecilia reticulata*. *PhD Dissertation*, Department of Biology and Helmholtz Institute, Utrecht University (in English with Dutch abstract). Supervisors: S.M. Reader (Utrecht and McGill Universities) and J.J. Bolhuis (Utrecht University).

Leris, I. (2008). The effect of sex and rearing temperature on swimming performance of zebrafish (*Danio rerio*). *MSc Dissertation*, Department of Biology, University of Crete (in Greek with English abstract). Supervisors: M. Kentouri (University of Crete) and M. Pavlidis (University of Crete).

Leris, I. (2006). The effect of rearing temperature on body shape differentiation in zebrafish, *Danio rerio* (Hamilton 1822). *BSc Dissertation*, Department of Biology, University of Crete (in Greek with English abstract). Supervisor: M. Kentouri (University of Crete).

Presentations

1. Chouinard-Thuly, L., Reddon, A. R., **Leris, I.** & Reader, S. M., 2017. Developmental experience affects habituation to a mild stressor in female but not male guppies. SICB Annual Meeting 2017, New Orleans, LA, USA.
2. **Leris, I.** & Reader, S. M., 2014. Early social environment and the development of social learning in guppies. SQÉBC 39th Annual Meeting, Université du Québec à Montréal, Montréal, Canada.

3. **Leris, I.**, Atienza-Alonso, M., Robat, E. & Reader, S. M., 2013. Individual consistency and heritability of guppy social behaviour. 45th European Brain and Behaviour Society Annual Meeting, Munich, Germany.
4. **Leris, I.**, Atienza-Alonso, M., Robat, E. & Reader, S. M., 2013. Are individual differences in shoaling and social learning consistent and heritable? 50th Annual Conference of the Animal Behavior Society, Boulder, Colorado, USA.
5. **Leris, I.** & Reader, S. M., 2012. The effects of early social environment on social learning and grouping tendencies of guppies. Helmholtz Retreat, Bergen, The Netherlands.
6. **Leris, I.** & Reader, S. M., 2012. Does early social environment shape guppy social learning and grouping tendencies? SQÉBC 37th Annual Meeting, Université de Montréal, Montréal, Canada.
7. **Leris, I.** & Reader, S. M., 2011. Developmental plasticity of social learning and social behaviour in guppies. Netherlands Society for Behavioural Biology Annual Meeting, Soesterberg, The Netherlands.
8. **Leris, I.** & Reader, S. M., 2011. Guppies remember shoal locations in a spatial memory task. 'Evolution, Brain, Cognition', 18th Benelux Congress of Zoology, Utrecht, The Netherlands.
9. Sfakianakis, D. G., **Leris, I.** & Kentouri, M., 2010. Developmental temperature influences muscle lactate decomposition rate in zebrafish juveniles. Aquamedit 2010, 5th International Congress on Aquaculture, Fisheries Technology and Environmental Management, T.E.I. of Mesolonghi, Greece.
10. **Leris, I.**, Sfakianakis, D. G. & Kentouri, M., 2009. Effect of sex and rearing temperature on swimming performance of zebrafish (*Danio rerio*). 9th Panhellenic Symposium of Oceanography and Fisheries, Patras, Greece.
11. Sfakianakis, D. G., **Leris, I.** & Kentouri, M., 2009. Temperature-induced plasticity of swimming performance in zebrafish juveniles (*Danio rerio*). Aquaculture Europe 2009, Trondheim, Norway.
12. **Leris, I.**, Sfakianakis, D. G. & Kentouri, M., 2008. Body shape plasticity of zebrafish (*Danio rerio*) in response to different rearing temperatures. Aquaculture Europe 2008, Krakow, Poland.
13. Laggis, A., Sfakianakis, D. G., **Leris, I.** & Kentouri, M., 2007. The effect of temperature on skeletal malformations and meristic characters of zebrafish, *Danio rerio* (Hamilton 1822). 13th Panhellenic Congress of Ichthyologists, Mytilini, Greece.
14. **Leris, I.**, Sfakianakis, D. G., Laggis, A. & Kentouri, M., 2007. The effect of rearing temperature on body shape differentiation in zebrafish, *Danio rerio* (Hamilton 1822). 13th Panhellenic Congress of Ichthyologists, Mytilini, Greece.

Skills

Laboratory skills

- Establishment and maintenance of closed and circulating housing systems for freshwater and marine organisms.
- Breeding, rearing and maintaining guppy and zebrafish populations in standard or experimental conditions.
- Setup and maintenance of *Artemia* sp. and *Paramecium* sp. cultures for feeding fish larvae and juveniles.
- Identification and treatment of various common fish diseases.
- Ichthyologic sampling techniques (collection with electrofishing equipment and nets, blood sampling, measurement of morphometric characters).
- Measurement of chemical and physicochemical parameters of water with specialised instruments and kits (temperature, dissolved oxygen, salinity, ORP, TDS, conductivity, pH, hardness, NH₃/NH₄⁺, NO₂, NO₃, metals)

- Various laboratory techniques including anaesthetising, euthanising and preserving fish larvae and adult fish and molecular techniques including DNA extraction, PCR and sequencing.
- Micro- and macroscopic photography of fish specimens for image analysis (body shape, meristic count and morphological deformities).
- Selective double staining of cartilage and bone tissue of fish in early developmental stages (pre-larval, larval and juvenile), for ontogeny of the skeletal structure and detection of possible abnormalities.
- Scoring, quantifying and analysing animal and particularly fish behaviour, live or from video recordings using specialised software.
- Measuring fish swimming performance (prolonged swimming - U_{crit}) and its metabolic by-products in the muscles.
- Analysing experimental data (morphological characters, body shape, meristic characters, skeletal deformities, behavioural measures).

I have also been officially trained in the proper care and use of laboratory animals, by completing the 'Laboratory Animal Science' course in Utrecht University (November 2010, grade: 8/10).

Computer skills

- Very good PC knowledge (Microsoft Windows 7, 8 and 10, Microsoft Office 2003-2014, Adobe InDesign and Dreamweaver).
- Good knowledge of statistical analysis software (Statistica, Sigma Stat., Sigma Plot, SPSS).
- Good knowledge of image processing software (Adobe Photoshop and Illustrator, Corel Draw, Google SketchUp).
- Good knowledge of and video capture and editing software (Adobe After Effects, Debut Video Capture, Windows Movie Maker).
- Good knowledge of automation software (Autolt, MatLab, some experience with R).
- Good knowledge of various research-specific software (Jwatcher, TPS, ImageJ).

Interests

- Aquatic biology and ecology in general (nutrition, morphology, reproduction, behaviour).
- Fish biology and physiology (swimming performance, metabolism, sex differentiation, osteological development, morphology).
- Animal behaviour (social and individual learning, innovation, grouping, exploration, shyness/boldness, dispersal), behavioural and evolutionary ecology, cultural evolution.
- Conservation efforts and management of aquatic resources (population monitoring, habitat restoration and reintroduction of endangered species).
- Phenotypic plasticity and developmental plasticity in particular.

Other interests

I enjoy keeping and breeding aquarium fish as a hobby and I am a moderator in Greek Aquarists' Board (www.aquatek.gr) an aquarium-related online forum. My other hobbies include working out, playing board- and video-games and brewing beer at home.