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pheromones and welfare indicators - the 'Faro Workshop'

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Special Issue on bioactive water-borne chemicals: pheromones and welfare indicators — the ‘Faro Workshop’

Preface

From the 17th to the 19th of September 2007, over forty scientists from all around the world gathered in Faro, Portugal, with a common interest: the measurement of bioactive compounds in water, their detection and biological effects — both behavioural and physiological — on aquatic fauna.

Given the multi-dimensional nature of understanding the complex problem of production, release, detection and effects of chemical cues in the aquatic environment, and the wide variety of experimental approaches that this entails — from molecular biology to behaviour — there was a growing feeling within the ‘pheromone community’ that a small meeting dedicated to this issue was long overdue. The first ‘Faro Workshop’ took place back in 1995!

Therefore, over three days, talks and posters were presented on the production and release — controlled or not — of chemical cues by fish and crustaceans. Topics ranged from cue detection at the molecular level, to the processing of this sensory input by the olfactory system and the physiological and behavioural effects of this information. Moreover, it was a chance to renew old acquaintances and begin new ones, and to discuss common problems and future collaborations with a wide variety of workers. The conversations often occurred in the numerous local bars and restaurants (the Algarve is renowned for its seafood). The workshop was a great success and discussions have begun to plan a similar workshop in Faro in 2010.

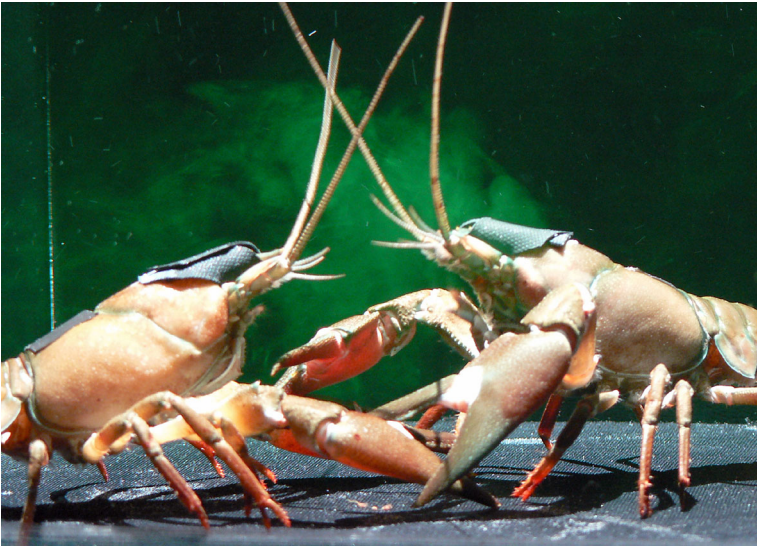
Before the workshop, the real editors of *Behaviour*, Brian Wisenden and Paul Albers, were persuaded that it would be a good idea to publish some of the work presented at the workshop in a special edition of the journal. This issue is the result. One of the main themes of the meeting was measurement of steroid hormones released to the water to assess endocrine changes in



The delegates of the 'Faro Workshop' (September 2007): Join us in 2010. Photo: Andreia Pinto.

fish where blood sampling is impractical. This theme is well represented here (Fanouraki et al., 2008; Wong et al., 2008; this issue). Indeed, one of the papers on this topic arose as a direct result of (often heated) discussion among the delegates; the so-called 'consensus paper' (Scott et al., 2008; this issue). Closely related are those studies investigating chemical cues released to the water by which fish may recognise potential mates or sexual rivals (Archard et al., 2008; Corkum et al., 2008; Hirschenhauser et al., 2008; Huertas et al., 2008; Sisler & Sorensen, 2008; this issue).

Despite the 'fishy' bias of the organising committee, the crustacean community is also well-represented. Urinary chemical cues seem to be used by crustaceans in a manner similar to fish to establish dominance and attract mates (Berry & Breithaupt, 2008; Katoh et al., 2008; this issue). However, this does not always seem to be in a species-specific cue as it often is in fish (Bublitz et al., 2008; this issue). Of course, aquatic organisms do not just use chemical cues to assess conspecifics. Finally, olfactory detection and assessment of potential predators and prey is also important; Dalesman & Inchley (2008; this issue) investigated the interaction of visual, mechanical and olfactory cues in predator avoidance in the hermit crab.



Cover picture. Fighting male crayfish (*Pacifastacus leniusculus*): Crustaceans often use chemical cues in their urine (green plumes) to signal dominance and/or sexual status to one-another (see Katoh et al., 2008; Berry & Breithaupt, 2008, this issue). Photo: Fiona Berry.

We would like to take this opportunity to thank the editors for their help and forbearance, especially with our fumbling ineptitude with the Editorial Manager system, and their belief in this project from its conception. We would like, also, to express our appreciation to the referees for their largely unseen but vital role in this process, and to the authors without whose contributions the whole enterprise would have been pointless.

Hope to see you all again — and more — in 2010!

The 'Faro Workshop' Organising Committee

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