

Workshop & Conference Reviews

Maternal Effects in Zebra Finches – Status Quo and Where We Go

The workshop on “**Maternal effects in zebra finches – status quo and where we go**” took place in Bielefeld (Germany) on 14- 16 March, and was well organized by Klaudia Witte. There were 17 participants from the following institutions: University of Glasgow, University of St. Andrews, University of Cambridge, University of Groningen, MPI for Ornithology in Seewiesen, University of Bielefeld, Jagiellonian University and Lund University.

This was the second workshop on this topic, and certainly not the last one. The first workshop on maternal effects in zebra finches was organized by Ton Groothuis, Nikolaus von Engelhardt and others (University of Groningen) in Groningen two years ago.

In Bielefeld, ten speakers presented their recent results on maternal effects and related topics in zebra finches, and due to a relaxed time-table we had plenty of opportunity for intense discussions. The studies focused on manipulations of a bird’s social environment, the influence of male color rings, the availability of food or carotenoids and the influence of maternal androgens on maternal reproductive success. The studies also showed that female investment into eggs can influence offspring sex ratio, embryonic and post-hatching development and survival of the young. Attention was paid to sex-specific effects, such as sex differences in growth, begging rate, survival and immune response. Several studies looked at long-term consequences of maternal effects on the offspring’s future performance during adulthood, as measured by sexual attractiveness, quality of male song and reproductive performance of these young. These studies followed the consequences of maternal effects at the intergeneration scale, undoubtedly an important element in studies of evolutionary trade-offs. Several of these results were consistent between different populations; however, some of these results still require replication using similar experimental designs. It was also suggested that future research should pay greater attention to the significance of paternal effects.

Two participants would like to initiate projects in which we eagerly agreed to join:

- 1) Wolfgang Forstmeier from the Max Planck Institute for Ornithology, is planning to use microsatellite markers for zebra finches for

scanning up to 30 different populations on which research in behavioral ecology is being conducted. He would, ideally, like to get samples from 50 randomly-chosen individuals from each population. This will allow him to investigate the genetic structure of each population, as well as the degree of relatedness between populations. Knowing how similar / different our populations are may help to understand whether differences in findings between labs are due to environmental or genetic factors. Laboratories that provide DNA samples for this survey will in turn learn which markers exhibit the highest polymorphism, and hence are most suitable for studying relatedness in their own zebra finch population. For more details on this project please contact Wolfgang Forstmeier at: forstmeier@orn.mpg.de.

- 2) Lucy Gilbert from the University of St. Andrews pointed out that several studies reported significant effects of male color rings on maternal investment without actually providing evidence that female zebra finches show consistent preference for this artificial ornament. She suggested collecting and evaluating all available, unpublished data on results of preference tests with red- and green-ringed zebra finch males. Anyone who has studied this topic is welcome to contribute to this multi-lab collaborative review. Please contact Lucy Gilbert at: Lg18@st-and.ac.uk.

Being zebra finch addicts, the participants of the workshop missed terribly their study species left back home. Luckily, the program of the workshop included a visit of the zebra finch colony at the facilities of the University of Bielefeld. It gave us a unique opportunity to see the only population of wild zebra finches in Europe. The nightlife of Bielefeld was enjoyed nearly as much as the visit to our beloved birds.

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