Comparative Cognition

from Ethology to Cognitive Science

DUCOG

Invited Speakers:

Redouan Bshary, Irene Pepperberg, Josep Call,

Tecumseh Fitch, Márta Gácsi, Anna Wilkinson

Chairs:

Anna Kis, Attila Andics

Organizers:

Csaba Pléh, Anna Kis, Attila Andics, Paula Fischer

Anna Gergely, Nevena Padovan, Francesca Bonalumi

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CENTRAL EUROPEAN COGNITIVE SCIENCE ASSOCIATION

Poster Session IV.: Saturday, April 30, 14:30–16:00

Session IV.

Different Eyes but Similar Processing? Visual cognition in the jumping spider

Massimo De Agrò, University of Padua, Italy
Lucia Regolin, University of Padua, Italy
Enzo Moretto, Esapolis Living Museum of Padova Province and of the MicroMegaMondo of Butterfly Arc, Italy

Providing convincing evidence in favor of cognitive behaviour sometimes constitutes a real challenge, this is particularly true when the subject is an invertebrate. An exception may be the jumping spider (Salticidae), as these species make a very good model of investigation, already acknowledged in the literature for spatial cognition (Tarsitano et. al., 1997), learning (Jakob et. al., 2007) and decision making (Cross et. al., 2014). We use a double choice paradigm to assess the ability of Phidippus regius to discriminate between two shapes, such as a triangle and a square, with the purpose of testing if they are able to see a triangle in the Kanizsa illusion. We believe infact that in spite of a very focal vision (Menda et. al., 2014) these animals could compute images through configural processing, allowing for amodal perception, as already demonstrated for species endowed with camera (Vertebrates) or with compound (Insects) eyes. Preliminary pilot tests were run on adult individuals with encouraging results. Experiments on shape discrimination are currently ongoing on F1 (male and female) juveniles and the first novel data will be discussed.

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