

## Programme Day Evolution & Behaviour Tuesday 18<sup>th</sup> of December 2007 Naturalis, Leiden

09:30 Coffee

09:45 Opening by programme chairman prof. dr. Serge Daan

10:00 Lecture by dr. Josep Call, Max Planck Institute for Evolutionary Anthropology

<http://www.eva.mpg.de/psycho/staff/call/index.htm>

Title: "On the evolution of thinking ahead" *Many animals can anticipate upcoming events. Such anticipation is particularly useful when solving complex problems such as tool use. Two different aspects of planning have been emphasized in relation to tool use. One aspect has to do with the properties of the tools as they relate to the problem that the individual is attempting to solve. For instance, to insert a stick in a hole in order to fish for termites, the tool has to have the right diameter and a certain degree of pliability so that it may adopt the irregular shape of the termite mound internal galleries. Having some insight into the critical features of the problem may allow individuals to decide beforehand between possible alternatives, thus reducing energy and time expenditure that may be incurred by trial and error learning. Another aspect of planning that has received much less comparative attention is the question of planning for future events. Unlike the previous form of planning, which focused on feature information, planning to meet future events revolves around the temporal dimension. Thus, the question is not which tool is more appropriate to solve a certain problem but instead when a tool will be needed to solve a given problem. Clearly humans combine both aspects when planning to use tools. Indeed, planning in tool-related activities has been hypothesized to play a critical role in the evolution of human cognition. However, little is known about how those skills may have evolved. Comparative studies of extant species offer one of the best ways to gain some insights into the evolution of this skill. Such comparisons should include both closely related and distantly related species. In this paper I will present some evidence of the featural and temporal aspects of thinking ahead in birds and apes and discuss them in relation to broader issues on cognitive evolution.*

11:30 Research project presentation by drs. Jorg Massen "Friendships and the balance of benefits provided and received in monkeys and man." projectleaders: dr. Liesbeth Sterck and dr. Henk de Vos

12:15 Lunch

Chair prof. dr. Luc Soete

13:15 Research project presentation by dr. Reint H. Geuze and dr Bernd Riedstra "Is two times a half more than one? Function and evolution of brain lateralization in animals and humans" projectleaders: dr. Ton Groothuis and prof. dr. Anke Bouma

14:00 Short break

14:15 Research project presentation by drs. C. Fruteau "Economic behaviour in vervet monkeys" projectleaders: prof.dr. Eric van Damme and prof.dr. Ronald Noë.

15:00 TECT (The Evolution of Cooperation and Trading) -COCOR (Cooperation in Corvids) by prof. dr. Ronald Noë

15:30 Presentation by Jeroen van der Brugge followed by a tour at the exhibition "Zo Apen Zo Mensen"

16:30 Closing, followed by drinks