

Unité d'accueil : EthoS, Ethologie Animale et humaine (CNRS, Université Rennes 1, Université Caen Normandie)

Equipe d'accueil : NECC, Neuro-Ethologie Cognitive des Céphalopodes, Caen

Encadrant : L. DICKEL, Professeur en Biologie des Comportements

Emotion et prises de décision chez la seiche.

Grants : ANR-13-BSV7-0002 (→2018)-PRC/CNRS (→2021) –UMR CNRS 6552 EthoS (→2021)

Location : Caen CREC Plateforme éthologie des animaux marins (EAM, RIN-CPER 2020)-SMEL-Ben Gurion University Eilat-Beer Sheva (Israel) and Sinshu University, laboratory of Visual Ecology (Taiwan).

Emotional states and their potential underlying processes in animals are still under sharp debate.

This PhD subject is expected to provide new insights about emotional behaviours in a “sophisticated” invertebrate: the cuttlefish (*Sepia officinalis*). Psychological needs of invertebrate species remain largely unknown and unexplored.

We aim to find new tools and knowledges to assess cuttlefish psychological suffering (negative emotion) or well-being (positive emotion). The role of developmental environment in individual emotional traits will be determined. The ultimate goal is to understand the evolutionary roots of animal emotion and primary consciousness, fundamental issues in Biology and in Bioethics.

Step 1 : Characterizing emotion-like behaviour.

We will describe and assess both negative and positive emotion-related behaviours in cuttlefish when placed in appropriate conditions.

Step 2 : Measuring emotion through cognitive bias.

Cuttlefish, the emotional state of which are known, will be confronted to ambiguous choice to determine whether negative emotional state can induce pessimistic choice, as assessed in the literature.

Step 3 : Effects of individual history in emotional traits

By exploring emotional traits of individual when previously reared in different conditions, it

is expected to determine the influence of individual history in emotional profiles (personality) in cuttlefish.

Grants obtained related to this project: ANR-13-BSV7-0002-01 (first year), PRCi CNRS Caen-Eilat (IL) (three years), UMR 6552. Application for additional Grant : ANRi ETHiCS (2018-2022).

This PhD will be done both in Caen, at the IUI of Eilat (IL) and possibly at the Sinshu University (Taiwan) with at least three research Short-Term Missions, granted by the PRC CNRS (2018-2020) and possibly ANR-PRCI ETHiCs (2018-2022) programs.