

**A04**

**UNSUCCESSFUL ATTEMPT TO MEASURE SOUND RELATED EVOKED POTENTIALS ON CUTTLEFISH (*SEPIA OFFICINALIS*)**

**Alex Mas (1), Marta Solé (1) , Joan Castell (1) , Michel André (1)**

(1) Laboratori d'Aplicacions Bioacústiques, Universitat Politècnica de Catalunya (UPC)

✉ [alex.mas@lab.upc.edu](mailto:alex.mas@lab.upc.edu)

Depending on the species, cephalopods are presumably sensible to low frequency waves up to 1000Hz. This range of frequencies overlap with noise associated to many human activities at sea such as shipping or seismic surveying. Because cephalopods spp. represent the main preys for many cetaceans, the mechanisms of sound perception and the sensitivity of these species to sound exposure should be investigated. Here, we describe an attempt to obtain central nervous system responses to sound stimuli in cuttlefish. The animals were captured from the sea during the mating season through traditional fishing techniques with no hooks and no physical damage. They were fed and kept in large sea water tanks until they were considered to be behaviourally stable enough to perform the tests. The measurement hardware consisted of a sound projector and a biopotential signal amplifying system (subdermal electrodes and a custom biopotential amplifier), both controlled via a Labview Interface. The animals were anesthetized and injected with a muscle relaxant to prevent them from moving and saturating the biopotential amplifying stage. The acquisition of the responses failed because of the animals' reactions to anesthesia and the effects of the muscle relaxant as well as the fast corrosion of the subdermal electrodes. There was also a problem with the electrode impedance match with the amplifier stage. The consecutive corrections to the protocols and hardware design are presented for the next season attempt.

