1116-62-2542 **C R Donovan*** (crd2@st-andrews.ac.uk), CREEM, The Observatory, Buchanan Gardens, St Andrews, KY169LZ, United Kingdom, and **M L Mackenzie**, **A Webb** and **N B Erichson**.
Modelling spatio-temporal animal distributions using high-definition video surveys.

High-definition aerial surveying is becoming an increasingly popular means to survey animal populations, particularly in the context of Environmental Impact Assessments. The data gathered naturally avoids some of the biases found in other surveying methods, but still presents substantive modelling challenges, such as extremely large data volumes. We present here a) work on efficient object identification in video using randomised Dynamic Mode Decomposition and b) modelling approaches for density surface estimation using spatially adaptive smoothers, whilst accounting inferentially for temporal autocorrelation. (Received September 22, 2015)