Computer Aided Taxonomy: A Case Study on the Automated Identification of Invasive Ladybirds in the UK

M.Z. Ayob and M.K.A. Kadir

Abstract: Feature selection and minimization are some of the early steps in a **pattern recognition** system. Computer aided taxonomy consisting of decision tree and human interaction is proposed as an intermediate process in the identification of invasive ladybirds in the UK. The proposed methodology have been compared with learning-based system such as multilayer perceptron (MLP). The J48 has been able to reduce the span of features. Using J48 decision tree along with MLP shows that the decision tree and human interaction together forms a constructive element for improving the identification of ladybird species with black spot colours.

keywords

Computer aided taxonomy; Decision tree; Human interaction; Multilayer perceptron; Species identification

DOI: 10.3923/ajsr.2016.266.272