ATTACHMENT C

The Role of Universities and Taxonomy

1. The contribution

- Australia has unique biodiversity, yet we are losing our capacity to recognise it. Universities play a vital but diminishing role in taxonomy - the science of naming, describing and identifying species. Taxonomy underpins environmental management, conservation and biosecurity in Australia and is vital to a number of key industries including agriculture, forestry and fisheries. Australia has been a global leader in taxonomy, and Australian scientists have been acknowledged as global leaders in innovative digital virtual solutions to research questions. Universities undertake a significant component of taxonomic research, as well as being essential for training new taxonomists.

2. The challenges

- Taxonomic courses at Australian universities are declining, as are the number of students studying in this field. This is because of the absence of clear early career pathways in taxonomy. Currently, there are now only five remaining universities in Australia with significant research and undergraduate coursework in taxonomy. On average, the combination of these universities result in one taxonomist entering the workforce each year. The nation currently needs an average minimum of four to maintain the existing workforce.

- The only ongoing source of support for taxonomic research graduates is via the Department's Australian Biological Resources Study's (ABRS) National Taxonomy Grants Program. Some support is given through the CERF program's National Taxonomic hub, but the CERF funding is addressing specific taxonomic issues over a 3-4 year period, which will not provide an enduring solution to the large scale problem faced now in our diminishing ability to identify our native flora and fauna and invasive species.

- A survey of Australia's taxonomic workforce for 2003-2006 revealed:
  - 30% of the Australian taxonomic workforce consists of retirees working voluntarily;
  - a large number of paid taxonomists were nearing retirement (43% of working taxonomists are over 45 years of age);
  - an average of four taxonomists are lost every year and only one taxonomist gained; and
  - 50% of the workforce will be lost by 2028

- The number of taxonomists is in accelerating, long-term decline. This is the result of a combination of a long-term stable workforce that is now at or past retiring age, lack of funding and lack of new recruits. Modelling done by ABRS suggests that if the current rate of replenishment of the workforce persists, Australia's taxonomic capacity will reach an irrecoverable level by 2020. We will neither have the capacity to identify our biodiversity nor to train new taxonomists.