

Reference Entomology**RECOMMENDATION**

1. That the NAMP Technical Committee **NOTE:**
 - a) The need for training of new entomology teams across Australia

BACKGROUND**2. The functions of the NAMP reference entomology program are:**

1. Confirm identification of *Culicoides* specimens collected by NAMP;
2. Build and maintain a reference collection of Australian and important exotic species of *Culicoides* DNA barcodes and both slide-mounted and ethanol preserved specimens to assist with identification of specimens collected by NAMP;
3. Provision of mounted specimens of *Culicoides* species to NAMP entomologists on request;
4. Assisting in the preparation of identification aids for *Culicoides* species;
5. Provide advice and reports to stakeholders and clients (particularly producers, exporters, and AG-DAFF) as required;
6. Monitor NAMP entomology operations to ensure that they are effective and efficient in meeting the program objectives and report to the program manager;
7. Advise the program manager of national and international entomology issues which may affect the future focus of the NAMP;
8. Coordinate and propose to the NAMP Technical Committee, technical development of the NAMP entomology capacity as required;
9. Contribute to the maintenance of the NAMP Business and Operational Plans including ensuring that an adequate budget is proposed for agreed reference entomology activities;
10. Outsource slide mounting of *Culicoides* specimens to Biting Midge Laboratory Services;
11. Monitor succession training for the role of Reference Entomologist;
12. Facilitate the publication of technical entomology material for the NAMP as agreed by the NAMP Technical Committee.

Almost all of the NAMP reference entomology budget is used to outsource the mounting of specimens onto slides (function 10) which is required to facilitate the identification of specimens (function 1), build a reference collection (function 2), provide specimens to other entomologists (function 3), identify changes in risk posed by exotic species (function 7) and used in the production of identification aids (function 4). Where required, for example the detection of species not previously reported from Australia, confirmation of identifications is provided by DNA analysis conducted by NSW DPI (function 1) relies on data from the DNA library (function 2). A system to pay for this service is now available and part of the Reference Entomology budget will be used to support this function.

DISCUSSION**1. Detections**

No detections of exotic species were made during 2020/2021.

2. Identification Service

A total of 36 specimens from 21 collections were received for identification from Qld and 166 specimens from 97 collections from the southern states. Mounting of these specimens onto slides and submission for DNA barcoding continues and the reference collection is slowly becoming more comprehensive.

3. Training

Processing of southern states collections has transferred to the Orange Agricultural Institute and is managed by Birgit Loecker and Peter Gillespie. Processing of north Queensland collections managed by NAQS is now being undertaken by Bill Doherty, ex QDPI. Anna Genge has replaced Stacey Anderson in NAQS Darwin and has assumed responsibility for identification of WA insect collections. A workshop providing training to these teams was planned in Orange for August 9-13 but postponed due to travel restrictions. It was rescheduled for October but that is dependent on the travel situation in NSW.

4. African Horse Sickness

The outbreak of African Horse Sickness in Thailand prompted a need for information on potential vectors of this virus in Australia and neighbouring countries. DAWE has funded a project investigating midge species that attack horses in northern Australia by testing blood meals of specimens and direct aspiration of specimens from horses. BVL has the contract with identification of specimens being undertaken by NAQS.

FINANCIAL IMPLICATIONS

Nil

CONSULTATION/COMMUNICATION

NEXT STEPS/ACTIONS

Nil