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19 JUL 2010

LEGISLATIVE
COUNCIL

GP10/80

**Additional Questions on Notice:
Inquiry into the RSPCA raid on the Waterways Wildlife Park.
To Ms Flanagan**

Questions from Hon Helen Westwood MLC:

1. What is the evidence of Chlamydia infection in Koalas that populate the Gunnedah region?

What is the evidence of Chlamydia infection in koalas that populate the Gunnedah region.

1) The eight koalas who were removed from the Waterways Wildlife Park were tested on the 4th and the 5th February at the Port Macquarie Koala Hospital for chlamydiosis. The test involved is commonly used in both human and veterinary medicine for analysing Chlamydia infections and is called Clearview Chlamydia MF Test (manufactured by Inverness Medical Innovations) and is a rapid immunoassay to determine a positive or negative status of the patient. This Clearview Chlamydia assay is often done in conjunction or as a comparison with another test called PCR (polymerase chain reaction) with both of them showing comparable results. All of the eight koalas showed a positive reading for Chlamydia in both the ocular (eye) and uro-genital swabs taken. The koalas also showed clinical signs of staining of the perineum and rump, the classic “wet bottom” smell, discharge and irritated inflamed genitals (this was observed in the koala enclosure on the 3/2/10 by Dr Michelle Campbell and myself and also was noted on the 4th and 5th February by Dr Christopher Livingston). All of the koalas were ultra sounded on the 4th and 5th February (which shows damage of the uro-genital tract) with two of them exhibiting very large Para ovarian cystic structures (cysts beside the ovaries) that commonly occur as a result of Chlamydia infection.

As Chlamydia is a sexually transmitted disease and these koalas had not been in contact with any male koalas from the time of removal from the Waterways Wildlife park to the time of their assessment some 24-48 hours later, then it is fair to assume that these koalas were exposed to an infected male koala at some point whilst at the Waterways Wildlife park prior to the 3/2/10.

It is also important to note that for the entire time the Gunnedah koalas were held at the Port Macquarie Koala Hospital they were held in isolation/quarantine and did not come into contact with any male or female Port Macquarie koala.

2) In 1998 Dr Jeff McKee, and Dr Stephen Phillips (see attached email) undertook a research project in the Gunnedah/Pilliga area capturing wild koalas taking a number of samples and releasing the koalas. Swabs were taken of their uro-genital tract and eyes using PCR swabs and were tested at the University of Technology Queensland by Professor Peter Timms who would undoubtedly be one of Australia’s foremost authorities on the Chlamydia organism (and who has a large data base of populations of koalas having shown positive Chlamydia results), A number of the Gunnedah/Pilliga koalas showed a positive result for the Chlamydia organism with some expressing minor clinical disease.

3) The Chlamydial organism has been found in the majority of mainland koala

populations in Queensland, NSW and throughout Victoria with varying levels of expression of clinical disease (not all have been researched and tested). Thus it would be hard to accept that one population of koalas on mainland Australia would remain "Chlamydia free", particularly when the Gunnedah population is not geographically nor genetically isolated from other koala populations such as the tablelands koalas (Armidale, Tamworth, Uralla and Nundle) who certainly have many koalas exhibiting clinical expression of chlamydiosis. The Koala Hospital has treated a number of koalas for uro-genital and ocular chlamydiosis that have come from Nundle, Uralla, Walcha, Tamworth and Armidale over many years (records can be provided). As the Gunnedah koala populations are so close to these other populations it is hard to believe that they would remain isolated and unaffected by chlamydiosis.

4) It is my understanding that the Koala Infectious Diseases Research Group from the University of Sydney have given the Parliamentary Inquiry information that they did get a low level of positive Chlamydia in some PCR swabs taken of 10 wild Gunnedah koalas during recent field work.

From: Steve Phillips
Sent: Tuesday, 13 July 2010 2:50 PM
To: 'Cheyne Flanagan'
Subject: Chlamydia in Pilliga/Gunnedah

Hello Cheyne

I refer to your request regarding the disease status of koalas in the Pilliga/Gunnedah area. During 1997/98 myself and colleagues Dr Jeff McKee (UQ) and Prof. Peter Timms (QUT) undertook full clinical and physical assessments of 32 randomly captured koalas. These assessments included age-classing, blood biochemistry and haematology, and assays for disease including *Cryptococcus* and *Chlamydia*. In summary:

1. blood biochemistry and haematological values of Pilliga/Gunnedah koalas did not differ significantly from other studied populations;
2. via PCR using nasal/ocular & urogenital swabs we were able to confirm the presence of both *Chlamydia pneumoniae* and *C. pecorum* (as they were then known) recorded in the population,
3. Clinical expression of Chlamydiosis was generally low – 34% of sampled animals exhibiting either past or present unilateral/bilateral conjunctival scarring,
4. Clinical expression of Chlamydiosis in the form of reproductive tract infections (wet bottom/dirty tail) was also very low, less than 20% of sampled animals displaying any evidence of past/current expression
5. *Cryptococcus* was present in the population but not in evidence, colonies of the organism cultured from nasal swabs taken from 12.5% of sampled animals
6. What we now know as KoRV (Koala Retrovirus) appeared evident in the form of Lymphosarcoma in only a small proportion of the population (~3%), a factor we attributed to the relatively low numbers of older animals in the population.

In general terms, we attributed the generally low levels of clinical expression of disease to the fact that our demographic data also indicated a population comprised predominantly of younger animals (the mean age of animals we sampled was only 3.5 – 4 years); this we interpreted as the demographic profile typical of a recovering/expanding population.

I trust this information is useful. Please don't hesitate to contact me if you require any further info/data. My understanding is that this material has not been officially published, although various aspects of the work have no doubt contributed to various analyses undertaken by Peter Timms through the QUT Chlamydia lab. I have e-mailed Peter to get an update and will forward any relevant material.

Regards
Steve

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