An investigation into the feather disease syndrome in Rainbow lorikeets (*Trichoglossus haematodus molucanus*).

V. Nicolson* and L. J. Filippich#

*Currumbin Sanctuary
Gold Coast Highway Currumbin Qld 4223

School of Veterinary Science and Animal Production
The University of Queensland Qld 4072. Australia

Introduction.

Lorikeets have been presented to the wildlife hospital at Currumbin Sanctuary in significant numbers since it opened to the public. In the year preceding 17/7/99 a diagnosis of PBFD was ascribed to 179 Rainbow lorikeets, 33 Scaly-breasted lorikeets (*T. chlorolepidotus*), 10 Sulphur-crested cockatoos (*Cacatua galerita*) and a Pale-headed rosella (*Platycercus adscitus*). It is presently routine practice at Currumbin Sanctuary to euthanase lorikeets with feather abnormalities because although they may recover there is concern that they may be carriers of one or more viruses and constitute a threat to the wild population. Currumbin Sanctuary is an ideal place to study this problem. As well as the formal study undertaken impressions gained by clinicians who have worked with the Currumbin spring caseload need to be discussed.

Aim

The trial aims to study if Avian polyomavirus or circovirus (Psittacine Beak and Feather Disease Virus) or both are involved with the feather loss seen in lorikeets in South-East Queensland. If a viral aetiology is identified, the potential threat to the wild population from lorikeets which recover from feather loss and are rehabilitated, will need to be determined. In the event that results indicate some birds are an infectious threat and others are not, due to different viral aetiologies, the trial aims to identify physical markers for these two groups. If a single symptom or morphological difference could be found to differentiate the two viruses without requiring expensive laboratory tests then much unnecessary euthanasia could be avoided and the time and resources of wildlife rehabilitators could be more efficiently allocated.

Materials and Methods

A total of 30 birds were collected to represent 3 groups which were housed separately.

Group 1 - Loss of all primary feathers:
Group 2 - Loss of distal primary feathers only: and
Group 3 - Apparently healthy birds, collected at a similar time of year to the diseased birds.

A negative result to a clearview test on a swab from the conjunctivae and choana was required for health and safety of staff as well as increasing the probability of the birds surviving the study period.

Each bird was examined and banded with manual restraint before being housed with others in the same group. Basic quarantine procedures were use to prevent disease spread between groups. The birds were subsequently examined under anaesthesia on four occasions about a month apart. At the initial and final exam blood and tissue samples were taken. The birds were surgically sexed at the third anaesthetic and feather measurements were taken at each anaesthetic.

Anaesthesia allowed more thorough examination of the feathers during physical examinations while minimising stress to the birds. The demarcation of primary and secondary feathers was made by examination of the feather follicles with the palmar coverts gently retracted with a large "bulldog" paper clip. As well as counting, the primary feathers were distinguished by the fact that the follicles of the primary feathers are contiguous along the carpometacarpus and digits The same listed feathers were measured at each examination. All feathers were scored according to a set protocol. Any feather colour abnormalities were noted. An attempt was made at objectivity using a readily available commercial paint colour chart to aid description but this was unsuccessful. Any birds which died or were euthanased during the study, were necropsied.

Results

At the time of preparation of this proceedings paper, the virology results were unavailable and the results of the physical measurements and in house clinical pathology will be discussed at the conference meeting.