

## **COMPLICATIONS ASSOCIATED WITH DIET MANIPULATION IN CALLIMICO (*Callimico goeldii*)**

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### **Abstract**

The diet traditionally fed to *Callimico goeldii* in North American institutions has included a canned, nutritionally complete food combined with fruits, vegetables and insects. There has been a long-standing question as to whether the diet could be contributing to health issues in this species, particularly renal disease. Although, no direct correlation between the diet and renal disease has been documented, a primary concern continues to be the high levels of vitamin D that have historically been formulated into their diets. More recent clinical and post-mortem findings, hepatic and gastrointestinal disease in addition to renal disease, suggest that there may be other dietary issues besides the quantity of vitamin D that may be influencing the longevity and health of this species in captivity.

To investigate these concerns, information regarding diets offered at various Species Survival Plan Program (SSP) and European Endangered Species Programme (EEP) facilities (particularly the University of Zurich) was collected. Based on information gained through this process, changes to the existing *Callimico* diet were made. Efforts concentrated on formulating a diet that would be better accepted and improve stool quality. The reformulated diet contained less protein and vitamin D (in an attempt to lower the incidence of renal disease) and still met National Research Council (NRC) requirements. After one year on this new diet, several cases of rickets in infants and poor growth in adolescent *Callimico* were identified. This is the first report of nutritional disease caused by a vitamin D deficiency in this colony of *Callimico* in over 20 years of maintaining this species at Brookfield Zoo.