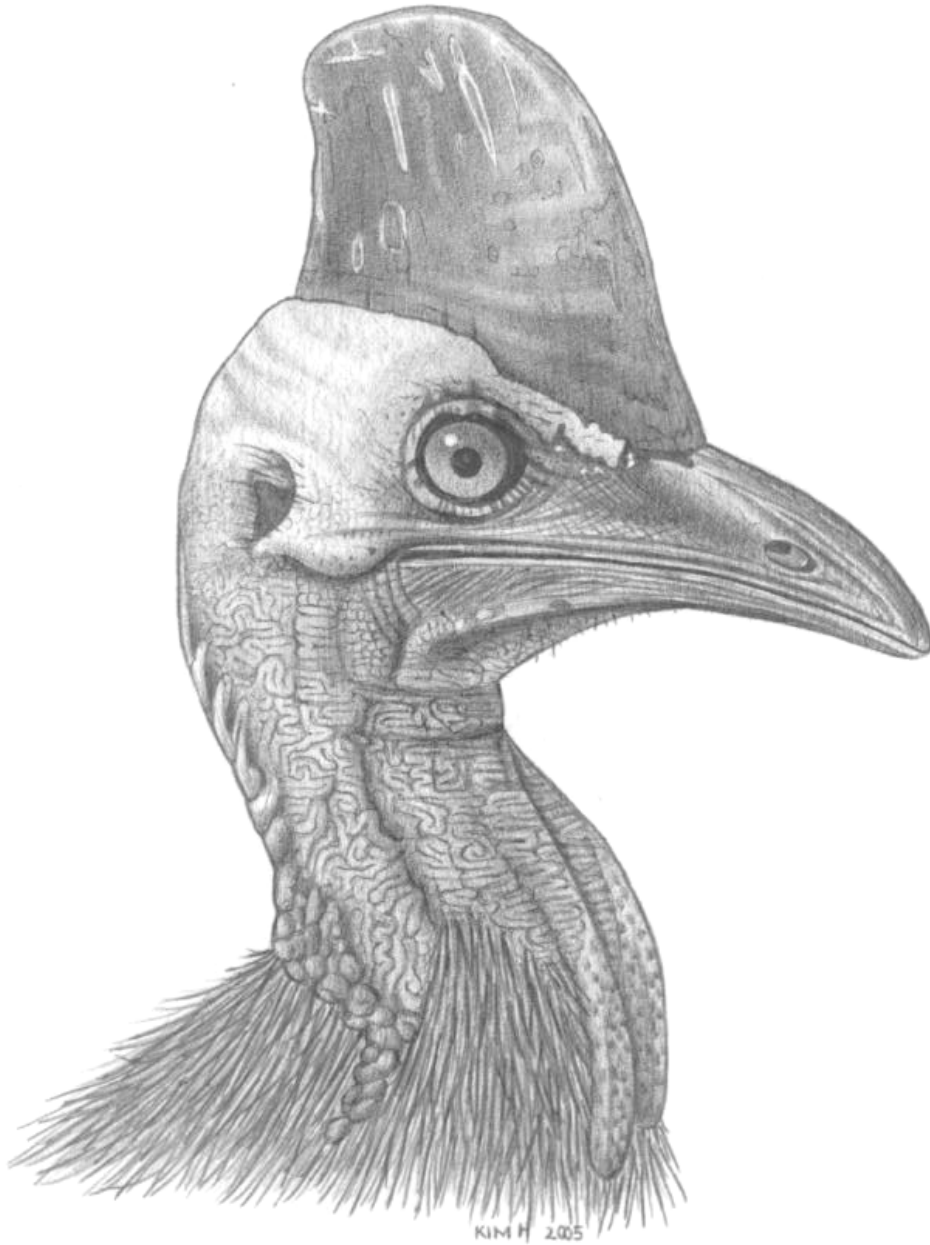


Wildlife Health in a Shrinking World: ECOLOGY, MANAGEMENT AND CONSERVATION



WILDLIFE DISEASE ASSOCIATION INTERNATIONAL CONFERENCE

June 26 - July 1, 2005
Cairns, Queensland, Australia



115) INVESTIGATION OF CUTANEOUS PAPILLOMATOSIS AND OCULAR CHLAMYDIALES INFECTION AFFECTING ENDANGERED WESTERN BARRED BANDICOOTS (*PERAMELES BOUGAINVILLE*) IN THE WILD

Kristin Warren¹, Amanda O'Hara¹, Ralph Swan¹, Andrea Ducki¹, Peter Tims², Tracey Bodetti³, Colleen Sims⁴, Tony Friend⁵, Stephanie Hill⁵ and Neil Thomas⁶

School of Veterinary and Biomedical Science, Murdoch University, Murdoch, WA 6150, Australia; ²Centre for Molecular Biotechnology, School of Life Sciences, Queensland University of Technology, Brisbane, QLD 4000, Australia; ³Queensland Institute of Medical Research, Brisbane, QLD, 4000; ⁴Department of Conservation and Land Management, Shark Bay, WA, 6537; ⁵Department of Conservation and Land Management, Albany, WA, 6330; ⁶Department of Conservation and Land Management, WA, 6026

The western barred bandicoot (*Perameles bougainville*) is an endangered marsupial, occurring in the wild on only two islands off the coast of Western Australia (Dorre and Bernier Islands). Initial conservation efforts focussed on captive breeding programmes, with the ultimate goal being reintroduction of captive-bred individuals into predator-proof enclosures and habitat in historical distribution ranges on the mainland. Whilst the captive breeding programmes have generally been successful, continued progress is being hampered by a progressively debilitating, wart-like syndrome and ocular Chlamydiales infection. Cutaneous papillomatosis has been detected in both captive and wild populations of western barred bandicoots. The small skin lesions resemble papillomas, however, as the lesions increase in size there is histological evidence of malignant transformation into carcinomas. The results from preliminary examination of skin lesions using light microscopy, transmission electron microscopy and indirect immunohistochemistry is suggestive of a viral aetiology. Ocular chlamydiales infection was detected in wild western barred bandicoots and was associated with conjunctivitis, ocular discharge, blepharitis and corneal opacity. Four Chlamydiales types have been identified by gene sequencing, including a strain of *C. pecorum* (which was different from strains previously found in koalas) and several new Chlamydiales genotypes. Further research aimed at investigating the significance of both of these diseases to the captive breeding programme for western barred bandicoots will be undertaken over the next three years in collaboration with the Western Australian Department of Conservation and Land Management. This research will be funded by an ARC Linkage Grant.