

C8: PHYLOGENETIC STUDIES ON *MACROPODINIUM* (CILIOPHORA:
LITOSTOMATEA)

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Members of the genus *Macropodinium* are the most distinctive ciliates inhabiting the stomachs of Australian macropodid marsupials. A phylogenetic analysis of 13 putative *Macropodinium* spp. was performed on the basis of morphological and molecular characterisations. Morphologically, three groups are distinguishable: one containing simple species (*M. setonixium* group); one containing reniform, unornamented species (*M. yalanbense* group); and one of heavily ornamented species (the "complex" group). Preliminary genetic data supports these groupings. The species groups are also associated with particular host groups. *M. setonixium* and the basale members of the "complex" group are found in *Setonix*, *Thylogale* and *Petrogale*; the *M. yalanbense* group are clustered in the subgenera *Macropus* (*Macropus*) and *M. (Osphranter)*; and the higher "complex" groups are found in the wallaby genera *Wallabia* and *M. (Notomacropus)*. Diet may be the determining factor. The *M. yalanbense* group are found predominantly in grazing hosts while the "complex" species occur in browsing hosts. Loose coevolution between *Macropodinium* and the macropodids cannot be discounted as diet is a key character in macropodid phylogeny.